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ABSTRACT

This draft report was prepared to review ways to improve the quality of care for young children (up to six years of age) in developing countries. Some suggestions are presented for consideration by these countries in establishing policies and expanding services and programs. Recommendations are included concerning UNICEF child assistance policies. The vulnerability of the young child and his special needs are discussed, particularly those for which more effective and practical action can be taken by developing countries with some help from UNICEF and other outside assistance. Discussions focus on the young child in deprived population groups, community involvement in improving the well-being of the family; and measures to increase the mother's capacity to look after her children and provide her with greater opportunities for education. A short bibliography of sources for further technical and operational information is included. (Author/CS)

JUL. 1 9 1974

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THE YOUNG CHILD: APPROACHES TO ACTION IN DEVELOPING COUNTRIES

A draft report and recommendations by the Executive Director

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FOREWORD

A great deal about the young child in developing countries can be stated in the following table:*

	Children under five	Annual deaths under 5	GNP per inhabitant 1970
Developing countries	412,000,000	16,500,000	$ 250
Industrialized countries	96,000,000	470,000	2,750

The figures are estimates but the general picture given is accurate enough. The developing countries, with 4 times more children under 5 years of age than the industrialized countries, have 35 times the number of child deaths - this means overall a young child death rate eight times higher. But even these figures understate the situation. Not revealed, because they cannot be assessed, are the costs in chronic ill-health, and stunted mental and physical development among those who survive.

It is an unacceptable situation, a challenge to all mankind. Poverty is, of course, a main contributing cause of the disadvantages to which so many children are subject, whether in the industrialized or developing countries. That the average inhabitant of the developing countries has less than one tenth the income of his counterpart in the industrialized countries is a special challenge, but that is not the subject of the present report. However, it is not necessary to wait until poverty is removed. Rather, a young child policy can contribute to removing it.

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* Based on a table in D.Morley, Paediatric Priorities in the Developing World (London, Butterworths, 1973), p.2. Statistics extracted from World Population Prospects as Assessed in 1968, (United Nations publication, Sales No.72.XIII.4) and Trends in Developing Countries (Washington, D.C., World Bank, 1973).

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Scientific and technical advances have greatly increased the means for reducing the contrast in the fate of children born in developing and industrialized countries. Safe and sufficient water can be provided through tube-wells bored more easily, and if necessary to a greater depth, than open wells. Most countries, even most communities, can grow the foods their children need. Immunizations against children's diseases have become cheaper, especially in recent years measles and polio vaccines, and cheap specific drugs make simple treatments available for many illnesses. Mothers can be taught literacy for the equivalent of about $10 per year for one or two years, and many home and village improvements are accessible. The reader of chapter III will be struck by the large amount of technical information now available, and waiting to be applied on a large scale.

The will to put these means to work on a large scale may be weak for a number of reasons. Often there is not sufficient awareness of the situation of young children; this can be remedied by political leadership and the mass media. Many feel that in any cased effective action is not possible; this report argues against that view. Some think it is better to concentrate on economic growth, and leave social problems to be solved by the benefits as they "trickle down"; there is extensive experience that this is not a satisfactory solution, and that, on the contrary, social measures can themselves greatly help national development. Some think that extending investment in human resources down to the young child is too long-term; in fact, it is no longer-term than a hydroelectricity plant or steel complex, and has much more widespread returns. Some think that the reduction of child mortality exacerbates the problem of population growth; on the contrary, the strongest motive for responsible parenthood lies in the aspirations of parents for the health and advancement of the individual child.

More can be done with present resources, by using them more effectively. In addition, developing countries need to commit a larger share of government resources to expand services to benefit the young child, and external aid agencies should help them in this field. Above all, more should be done to encourage local initiatives, and to help release local community energy and resources through such means as the reduction of illiteracy and seeking community co-operation and participation in the design, installation and recurring costs of services.

INTRODUCTION

1. This draft report has been prepared as a basis for a review by the Board, on what more can be done for the young child (up to six years of age) in developing countries. It suggests the main elements to be considered by the countries in establishing policies, and in deciding to expand services or programmes. It also makes recommendations about emphases in UNICEF assistance policies to benefit the young child. Indications are given of the vulnerability of the young child and his [1/] large unmet special needs, particularly those for which more effective action can be taken within the means of developing countries. Emphasis is on progressive advances that can be made by countries for the young child in the more deprived population groups, at different stages of national development; on community involvement in improving the well-being of the family; and on measures to increase the mother's capacity to look after her children, and to lighten her burden and provide her with greater opportunities for education.

2. After receiving the comments of the members of the Board, and after further consultations with specialized agencies and others concerned, a revised report will be prepared for circulation. In developing countries the main audience for the report, will presumably be planners and administrators in governmental units concerned with over-all planning, and in sectoral ministries; outside the Government it may be found useful by teaching and research institutions, professional groups, information media and non-governmental organizations (both of an operating and advocacy type) concerned with various aspects of social development.

3. This is not a technical report nor does it attempt a complete statement of the problem; rather it is focused on suggesting advances which are practical for developing countries to envisage, with some

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1/ In accordance with English usage the male pronoun "he" is used in this report to refer to both the female and male child.

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help from UNICEF and other outside assistance. References are given for the reader who wants sources for further technical and operational information. It is not the object of the report to help the professional reader in his own profession, but to give him an overview of related fields.

4. The Executive Director hopes that in industrialized countries the main lines of this report will be of interest to bilateral aid agencies, to those formulating positions of their Governments in intergovernmental bodies dealing with social issues, and to non-governmental organizations having international programmes.

5. The report will provide guidelines to UNICEF field staff as they discuss with Governments the linking of UNICEF aid with national development, and as they review specific programme proposals. In line with UNICEF's programme co-operation with other agencies in the United Nations family such discussions should, of course, also bring into the picture the expertise and technical support of these agencies.

6. This study is the second of its kind reviewed by the Board. An earlier study entitled "Reaching the young child" (E/ICEF/520) was the basis of a main agenda item at the Board's 1965 session. A summary of the study, the Board's discussion of it and the Board's conclusions are set forth in the report of the Board on that session (E/ICEF/528/Rev.1).[2/] The basic conclusion of the present report is the same as that of the earlier one, namely, that very much more can be done to benefit the young child given a greater awareness of both the problem and the possibilities for action, and given steady efforts by the developing countries and by the sources of external aid.

7. The young child has been of special concern to UNICEF for many years. Although most individual programmes that UNICEF has assisted have proven useful in improving his situation, the Board's view at its 1973 session was:

2/ The Board's conclusions are reproduced in E/ICEF/L.1308, a compilation of basic policy decisions excerpted from reports of the Executive Board, to be circulated to Board members prior to the 1974 session.

"In general, there has not been enough progress in developing a systematic approach to the infant, weanling and pre-school-age child that would encompass the whole range of his needs with special emphasis on those areas where action seemed possible - and that would involve parents and community" (E/ICEF/629, para.84).

8. The Executive Director wishes to express his appreciation for the work done in the preparation of this study by a number of his associates in UNICEF, including Mr. Tarlok Singh, Deputy Executive Director (Planning), members of his staff and Dr. Charles P. Gershenson, Visiting Professor of Child Development, Florence Heller School of Advanced Studies in Social Welfare, Brandeis University, the special UNICEF consultant who was responsible for the organization of a number of country studies (see annex II), and the bringing together and analysis of materials from them. The Executive Director wishes to record his special thanks to Mr. E.J.R. Heyward, Deputy Executive Director (Operations), who wrote much of the present draft.

9. In addition to the country studies, extensive use was also made of programme experience which UNICEF has had since the first study in 1965, as well as that reflected in numerous studies, publications and conference reports, which are referred to in the text and in the selected bibliography (annex I). The technical agencies of the United Nations family, and particularly their advisers to UNICEF, have contributed substantially to various sections of the report; the wealth of information from the agencies is reflected in the bibliography. There has not been adequate time, however, for the agencies to comment on the draft text itself, and they therefore cannot be presumed to have approved it. We look forward to the further contribution of their views and suggestions, which will be taken into full account in the preparation of the final report. For similar reasons of time and distance, we have still to benefit from the comments of our field staff on this text.

10. Finally, special thanks are due to the International Children's Centre, which agreed to contribute a study on the training of personnel for services for the young child (E/ICEF/L.1303/Add.1). This, in effect, forms part of the present report.

I. NATURE OF THE PROBLEM

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Summary

11. This chapter points out that young children need special attention for three main reasons:

(a) Their bodily growth and probably also their mental and behavioral development requires food somewhat different from the family's meals - more per kg. of body weight, more easily digestible, and richer in protein, vitamins and minerals than minimum adult requirements;

(b) They are particularly vulnerable to infectious disease, as they lose the passive immunity given by their mother, and face the hazardous years during which those who survive develop some resistance of their own. The hazards are especially high for children in marginal environments, especially if they are malnourished because of early weaning;

(c) The basic development of intellectual, emotional and social aspects of personality during this period affects their adult life and their contribution to society.

12. The young child depends on his family. Government and community services can support him indirectly through the mother and the family to a greater extent than by direct service to the child himself.

13. Government health and social services are at present reaching a small minority of children in developing countries. Budgetary limitations are a powerful constraint. Many countries with a GNP per inhabitant of approximately $100 or less in 1971 were spending annually no more than $1 per inhabitant on health services. However, some countries, as a matter of policy, manage to do more, and this is a very important contribution. In addition to bringing direct benefits, services for the young child should be seen as a long-term investment in human resources. From the latter point of view some

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have felt that the investments are too long-term in comparison with other human resource investments; however, they are no more long-term than many other investments in development.

14. The later chapters argue that it is possible to extend the resources available in developing countries by securing participation from the population served; by adopting better forms of organization for the delivery of services; and by a better-informed commitment of the nation to its new generations.

Importance of the first five years

Risk of mortality

15. The foreword has shown that as a global average the death rate of children below five years of age is eight times higher in developing than in industrialized countries. Deaths in that age group in developing countries usually account for from 30 to 50 per cent of all deaths compared with 3 to 5 per cent in industrialized countries. The total of deaths is usually broken down into two components - deaths of infants under one year of age, and deaths of young children aged one to four - between which there are some differences. Infant mortality [3/] has been declining throughout the world for some decades. In many industrialized countries it has decreased to between 15 and 25 deaths per thousand births, while in many of the developing countries the rate is recorded as between 50 and 100 per thousand or higher. Mortality statistics for the developing countries usually understate deaths, particularly in the rural areas.[4/] Often the registration for vital statistics covers only part of the country including the urban areas. Special enquiries, such as the one referred to in footnote 4/ give more reliable information.

3/ Deaths under 1 year of age per 1,000 live births.

4/ R.R. Puffer and C.V. Serano, Patterns of Mortality in Childhood (Washington, D.C., PAHO Scientific Publication No. 262, 1973), chap.2.

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16. The death rate is lower for children aged one to four years than in infants under one, but the contrast between industrialized and developing countries is even greater. In the industrialized countries this death rate is often one per 1,000 live births, or less. In the developing countries it can be 10 to 20 times this rate. In industrialized countries deaths of children in the age group one to four years, which account for mortality during four years of the young child's life, are one quarter or one fifth of mortality during the first year of life. In developing countries typical levels are two fifths, half or two thirds. Thus there is substantial scope for reduction of the death rate in developing countries from birth to age five. The higher infant and child mortality is largely reflected in the lower average expectation of life at birth, which as a global average, is 50 years in developing countries and 70 years in industrialized countries. Where vital statistics are weak, this is a more reliable indicator than recorded death rates.5/

Laying foundations for later growth and development

17. Survival of the young child is of the highest priority, but survival is not enough. Disease and malnutrition can leave indelible scars. Deprivation, particularly of maternal care, can have lasting effects on the child's personality. Failure to meet the basic physiological and psychological needs of the child sufficiently, or at the appropriate time, will hamper his future growth and development.

18. Although it is not fully known which early deprivations are reversible through rehabilitation, studies indicate that the more severe are the deprivations and the earlier they occur, the less likely it is that the effects will be reversed. In any case it is not desirable to allow conditions to develop for which special, and relatively costly, rehabilitation services are required, and which

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5/ Human Development and Public Health, WHO Technical Report Series No. 485 (Geneva, 1972), sect.2; also Demographic Yearbook 1971, (United Nations publication, Sales No. E/F.72.XIII.1), tables 29 and 31; The World Population Situation as Assessed in 1970, (United Nations publication, Sales No. E.71.XIII.4).

will not be available for most of the children who need them. The foundation for growth and development through the years of elementary school-age, adolescence, youth and adult life is laid in infancy and early childhood. In some respects the foundation begins in the womb; for example, low birth weight is likely to be followed by many health problems and a higher risk of mortality. Each stage of life, is, in part, a preparation for the next.6/

Vulnerability to nutritional deficiency diseases

19. The child grows most rapidly during his first three years and needs food to provide for this as well as for maintenance of his daily activities. He needs sufficient food, prepared in a form he can digest, since he can hardly handle family food as usually served; and for growth he needs a diet richer in proteins, minerals and vitamins than adults can live on. This requires special provision for the young child in the family food, and in a national food policy.

Vulnerability to other diseases

20. In the first few months of life, adequate maternal antibodies are usually present to protect the body against certain (but not all) infections. By the age of six months these antibodies are greatly reduced and may have disappeared by the end of the first year. The young child must develop his own immunological systems of resistances. If the environment is grossly unhygienic, the child is exposed to a host of infectious agents that he is physically unable to withstand.7/ Up to the age of five or six years, the typical child will often be ill with diarrhoea, respiratory infections and malaria; he may suffer trauma (burns and scalding), and a skin or eye disease; and also catch whooping cough, measles or chicken pox.

6/ Erik H. Erikson, Childhood and Society (New York, Norton, 1963), chap.7; Training of Personnel for Services for Young Children, International Children's Centre (E/ICEF/L.1303/Add.1), chap.1, sect.7.

7/ Human Development and Public Health, op. cit., sects.10.2 and 10.3.

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Dependence on the mother

21. Up to six years of age, the child is primarily dependent upon the mother and mothering persons. The extent and quality of the interaction between child and mother, and the early nurturing environment, profoundly affect his psychological development, including intellectual functioning. The interval between pregnancies and the number of pregnancies have important consequences for the survival, health and well-being of the mother and the family.

Interrelationship of the above five factors

22. Many of the above factors are interrelated and reinforce each other. For example, the degree to which dependence on the mother is fulfilled through breast-feeding commonly affects an infant's state of nutrition, and directly provides some immune bodies; this in turn affects his vulnerability to infectious diseases. Many illnesses are associated with malnutrition, which increases the severity of the illness. In many cases, death results from what in an industrialized country would be a relatively benign illness (e.g. measles). Infection and illness in turn exacerbate nutritional deficiency. The combined effect of intestinal infections, malnutrition and respiratory diseases, or of any two of these factors, is responsible for a high proportion of the deaths of young children. Chapter III argues that this interdependence should be reflected in the convergence of services, e.g., immunization, nutrition and other maternal and child health services.

Basic physical needs and the gap in services

23. No attempt is made in this report to define the basic needs of the young child in absolute terms. For action purposes, these have to be defined in relation to their cultural and economic context. In this report the emphasis is primarily on those needs which appear to have a physical and psychological universality and also:

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- are acute in the poorest developing countries and among the deprived groups in other developing countries;
- can be recognized as needs by the people; and
- for which government services and community action are feasible, (including some services almost entirely dependent on government).

24. The basic physical needs are water, food, shelter, clothing, and health. Water and food are discussed below. Needs for shelter and clothing are not discussed, though chapter III includes a section on home improvement. Instead of elaborating on the "need for health", this section discusses immunization, other maternal and child health services, and provision for a sanitary environment. Indications are given of the magnitude of unmet needs, and the financial limitations on government services. This section is followed by a discussion of the psychological needs of the child (which are of course interrelated with physical needs) and demands on the mother (paras. 54-66).

The magnitude of current needs

25. Much less than we wish for is known about the extent of unmet needs, even in the elementary terms referred to above. This is partly because the needs are so vast that it may seem that there is little use in measuring them. Countries tend to measure needs only when responsible people see possibilities of doing something about them. However, more than enough is known now to justify a large extension of action. What global information is available is summarized at the end of the discussion of each basic need. Such global information is of little use in diagnosing the situation of a particular country, because of the variations among countries and among different zones of the same country. But it gives an idea of the size of the problems facing the world community.

Safe and sufficient water

26. Polluted water carrying bacteria or parasites is a contributing cause of the sickness and death of the young child. In many

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situations and quantity of water used is just as important, because it affects family and household hygiene. Quantity depends on accessibility. Carrying water is a time consuming daily task for most rural women in developing countries, and this reduces the quantity used. Making conveniently accessible an abundant supply of safe water for drinking, bathing and washing, in addition to its other values, reduces exposure to innumerable pathogens in the immediate environment and thereby enables infants and very young children to make a smoother transition from the passive immunity provided by the mother to immunity acquired by gradual exposure.8/

27. Availability of safe water. Over 85 per cent of the rural population and some 30 per cent of the urban population of developing countries do not have access to an adequate supply of safe water.9/

Food

28. Maternal nutrition and birth weight. Foetal development, birth outcome, and the young child's growth are closely related to nutrition. The calorie consumption of the expectant mother affects the birth weight of the infant. It is preferable not to be underweight at the beginning of pregnancy, and when supplementation is needed it is desirable to begin it in the early stages. However, in many situations it is not feasible to provide supplementary food except during the second or third trimester. The concept of low birth weight (defined by WHO as 2.5 kg. or 5 1/2 lbs. or less) is used for

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8/ Human Development and Public Health, op. cit., sect. 10.4. The importance of water supply in Central and West Africa was emphasized in a special resolution adopted at the Conference of Ministers in Lomé. Children, Youth, Women and Development Plans in West and Central Africa: Report of the Conference of Ministers held in Lomé, Togo, in May 1972 (UNICEF, Abidjan, 1972), pp. 132-133. The Malawi case study, for example, states that "The value of good water supply is priceless, since the good water supply usually means an increase in health, which in turn means better workers for the fields, improved gardens, healthier and more alert students in schools, and generally a higher standard of living".

9/ "Basic Sanitary Services: the WHO programme for the advancement and transfer of knowledge and methods in community water supply and wastes disposal", WHO Chronicle, vol.27, No.10 (Oct.1973); World Health Statistics Report, vol.26, No.11 (1973) reports on the water supply situation in 91 countries, and the sewage disposal situation in 61 countries.

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working purposes instead of prematurity (because often the gestation period is not known). Low birth weight brings with it a higher risk of illness and death. Adequate protein, minerals and vitamins, are also essential for a good pregnancy outcome.[10/] Anaemias due to deficiencies of iron and folate are especially prevalent in pregnant women in developing countries and affect their resistance to disease and their capacity to work.

29. Breast-feeding. The infant who is successfully breast-fed by a properly nourished mother does not require additional food before four to six months; but unfortunately mothers are shortening the period of breast-feeding.[11/] Mother's milk is the best food for infants. It also conveys some antibodies, and the psychological advantages to mother and baby are an important part of the mother/child interrelations referred to below. Reasons for shortening the period of breast-feeding includes images of "modernization", which are often supported by commercial advertising and promotion, and the pressures of urban life and wage employment. The abandonment of breast-feeding often causes problems for the family budget. The family cannot afford

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10/ J.P. Habicht, C. Yarbrough, A. Lechtig and R.E. Klein, "Relationships of birthweight, maternal nutrition and infant mortality", Nutrition Reports International, vol.7, No. 5 (May, 1973) and "Relation of maternal supplementary feeding during pregnancy to birth weight and other sociobiological factors", Myron Winick (ed), Nutrition and Foetal Development (New York, Wiley Interscience, 1974). The authors say that data from Guatemala suggest that calories ingested early in pregnancy have the same effect as calories ingested in the last trimester. The earlier in pregnancy supplementation is begun, the more likely adequate amounts will be ingested.

The Lomé conference country reports drew attention to the immediate effects that malnutrition in pregnant women has on childbirth - miscarriages, hyperanaemic women in labour, underweight babies and undersized babies. They also pointed out that malnutrition in mothers is not a phenomenon unique to the rural environment, but is sometimes even more acute in peri-urban areas. Lomé conference report, op. cit., p.19.

11/ "Breast-feeding and weaning practices in developing countries and factors influencing them", PAG Secretariat, PAG Bulletin, vol. III, No. 4 (1973); "A survey of nutritional - immunological interactions" WHO Bulletin, vol. 46 (1972), pp. 537-546 discusses inter alia the role of breast-feeding in protection against diarrhoeas.

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enough of the substitute foods, especially of the commercial formulas. They are diluted too much, and the baby is underfed. The baby's bottle, used without the means to sterilize it, becomes an instrument of illness and death.

30. Transitional feeding. After breast-feeding only, ideally for four to six months, the baby begins a transitional period of mixed feeding in which breast milk is supplemented by other foods. Ideally, and especially in conditions of low income and a rather highly infected environment, this period should continue until the child is 18 to 24 months old, when he would be completely weaned. The weaning process, the desirability of prolonging breast-feeding, and the need for special preparation of food for the young child (para.19 above) are often not sufficiently understood by the mother.12/ In fact, the infant often receives the wrong kind of specially prepared food, e.g., paps that provide little more than calories, and even those in inadequate amounts because of their volume and dilution. In some places the traditional foods were better than those now given. The diet has deteriorated because of higher prices for such ingredients as curds and legumes, or because of the competition of "convenience foods", which are often less nutritious.13/

12/ At the Lomé conference most of the country studies expressed concern about the mother's lack of knowledge of proper weaning procedure resulting in an abrupt or premature ending of breast-feeding without the gradual introduction of transition foods (Lomé conference report, op. cit., p.18). The Malawi case study cites the common practice of giving the child during weaning a maize flour porridge and a little relish, which he eats from a family bowl. A survey taken in 1969 in Malawi showed that malnutrition becomes acute between the ages of 12 and 17 months.

13/ For example, the Yemen case study reports a decline in use of shabiza, a mixture of cereal, legumes, fat and sugar, for these reasons.

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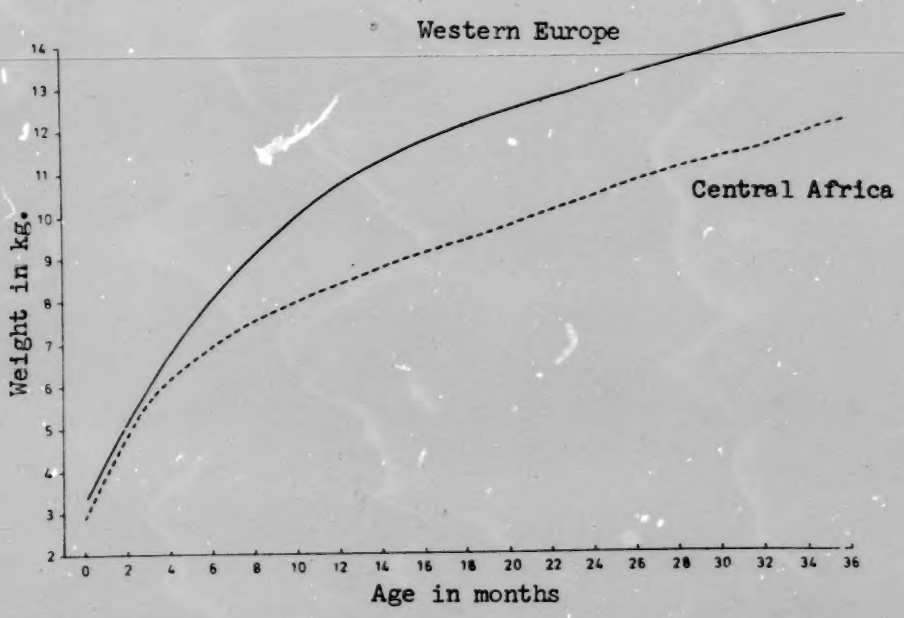
Figure 1

Comparison of median (50th percentile) weight of boys from Shi et Havu, Zaire, and St. Gilles, Belgium from birth to 36 months of age a/
(1970)



Source: Colloque Sur L'Allaitement Maternel, (Paris, International Children's Centre, 1973), p.41.

a/ Average birth weight approximately 2.9 kg.

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31. The typical growth situation in developing countries is illustrated in figure 1. Up to the age of four to six months, while he is on the breast, the infant grows as well, or almost as well, as does the infant in industrialized countries. As soon as he begins to need other food and is susceptible to various infections from the environment, he falls behind. Although the chart shows only retardation in weight, other handicaps frequently accompany this. The result is, as is stated in the Zambian case study, that "the incidence /of protein-calorie malnutrition/ is at its highest peak between one and four years of age ... The main biochemical nutritional deficiencies are protein, riboflavin, retinol (vitamin A) and iron". In some situations serious difficulties begin as early as six months of age, or even earlier if weaning is started earlier.

32. Extent of malnutrition. Although precise data generally are not available, a considerable amount is known about the extent of malnutrition. Seventy-seven sample surveys conducted in 46 developing countries during the last ten years, and analysed by WHO, have shown the range of prevalence of protein-calorie malnutrition of children at the time of the survey.[14] This is shown in the table below:

14/ Protein-calorie malnutrition is due primarily to shortage of both calories and protein in the diet. There is stunting of growth and development, and as the condition becomes more severe disruptions of metabolism become apparent and there is increased susceptibility to infections. Two extremes of the condition are recognized clinically nutritional marasmus and kwashiorkor. Emaciation is a main feature of marasmus, whereas in kwashiorkor there is oedema. Children who are 25 to 40 per cent below standard weight for their age are considered to have "moderate PCM", while those more than 40 per cent below standard weight are severe cases. If oedema is present in a malnourished child, the case is severe regardless of weight. (General reference: Joint FAO/WHO Expert Committee on Nutrition, Eighth Report, WHO Technical Report Series No. 447 (Geneva, 1971).)

Ranges of prevalence of protein-calorie malnutrition (PCM) in community studies made between 1963 and 1972 in three regions of the world

Region	No. of communities surveyed	No. of surveys	No. of children examined	Percentage prevalence of PCM		
				Severe forms	Moderate forms	Severe and moderate forms
Latin America	20	29	116,179	0-12.0	3.5-32.0	4.6-37.0
Africa	16	32	34,184	0- 9.8	5.6-66.0	7.3-73.0
Asia	10	16	43,326	0-20.0	13.0-73.8	14.8-80.3
	46	77	193,689	0-20.0	3.5-73.8	4.6-80.3

Source: J.M. Bengoa "The Problem of Malnutrition", WHO Chronicle, Vol. 28 (January 1974).

33. In order to obtain a global figure, it could be said that on the average, 3 per cent of young children in developing countries are suffering from severe protein-calorie malnutrition (kwashiorkor or marasmus). As a global total, this estimate means that there are between 9 and 10 million young children with these diseases at any one time, and the rate of mortality is high.[15/] An additional 20 per cent of young children suffer from moderate malnutrition and they will not reach their genetic potentials in growth and development.

34. Nutritional deficiency diseases. In large areas of many developing countries, nutritional deficiency diseases are prevalent, arising from lack of minerals (iron, iodine, etc.) and lack of vitamins,

15/ J.M. Bengoa op.cit., and D.B. and E.F.P. Jelliffe (eds.), Nutrition Programmes for Pre-School Children. Report of a Conference held in Zagreb, Yugoslavia, Zagreb: Institute of Public Health of Croatia, 1973, p. 5.

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especially vitamin A. A high proportion of pregnant women suffer from iron-deficiency anemia in Asia, this is estimated at 40 per cent and in the Eastern Mediterranean, 20-25 per cent. The proportion of young children affected is much higher.16/ In most developing countries deficiency of iodine, leading to the risk of cretinism, and the debilitating condition of goitre, is widespread in mountain areas where neither water from melted snow nor locally produced foods contain it. A WHO global survey showed that vitamin A deficiency, with the risk of blindness of young children in severe cases, is widely distributed, especially in South-East Asia, and also in parts of the Eastern Mediterranean, Africa (areas bordering on deserts) and Latin America. In sample surveys 8-10 per cent of young children are found with ocular signs of vitamin A deficiency.17/ The number of children going blind each year from this cause is well over 100,000 in South-East Asia.

Immunizations and protection against endemic diseases

35. The need for immunization is discussed here before other maternal and child health services because even in countries lacking funds to provide a wide coverage of health centres, it is possible to provide some immunizations through travelling vaccinators or mobile teams. The infant needs to be immunized against the same childhood diseases as do infants in the industrialized countries - diphtheria, pertussis and tetanus (DPT), smallpox, measles, polio, tuberculosis and, in certain instances, typhoid. His need for protection seems to be greater than in industrialized countries, in part because of more massive infection in the environment, and in part because his resistance is usually lower due to poor nutrition. Pregnant mothers need to be immunized against tetanus to provide protection to the child at birth.

16/ J.M. Bengoa op.cit.

17/ "The Prevention of Blindness", WHO Chronicle, vol.27, No. 1 (Jan. 1973). The India case study states that in some regions, 10-15 per cent of the children suffer from "night blindness". There are estimated 1 million cases of severe vitamin A deficiency in India.

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36. Measles deserve special mention as one of the most important causes of death of young children in developing countries, along with diarrhoeas with which they are often associated, thus triggering a process of deterioration in which malnutrition also plays an important part. During the first ten years of life, nearly every child catches measles, and the proportion who die is very high - it commonly ranges from 10-25 per cent. The study of mortality in the Americas already referred to showed that 20 per cent of deaths in the second year of life were due to measles.[18/] Measles are a severe problem in many parts of Africa, Latin America and Asia. An Arabian proverb says "Edd awladak ba'ad al-hasba ma-trouh" (count your children after the measles are gone).[19/] The complex of measles, diarrhoeas and malnutrition is more deadly than any of the components alone.

37. In addition to immunization, protection or treatment against a number of endemic or epidemic diseases can be given by relatively simple means. The most widespread is malaria, which in addition to affecting large numbers of children gravely, is also a major cause of low birth weight in some areas.[20/] It has been estimated that there are from 400 to 500 million cases of trachoma in the world, particularly the arid regions. In many cases the infection begins in the young child, when whole populations have been affected with trachoma and seasonal conjunctivitis, it is not uncommon to find 1 per cent totally blind and 4 per cent "economically blind" (i.e. unable to perform any useful work in which sight is essential).

38. Coverage. (a) Most countries immunize widely against smallpox, because this can be done by vaccinators or mobile teams, with boosters required only after five years. Increasingly, BCG vaccination against tuberculosis is being given to children at the same time. (b) Immunizations required only by the young child (e.g. DPT) may also be given by mobile vaccinators in ad hoc campaigns, in which case the coverage can be extensive. If they are given only to those children who attend

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18/ N.S. Scrimshaw, C.E. Taylor, J.E. Gordon, Interactions of Nutrition and Infection (Geneva, WHO, 1968); Patterns of Mortality in Childhood, op.cit., pp.146-152 and 349.

19/ Morley, op.cit., chap. 12.

20/ Morley, op.cit., p.79; "Prevention of blindness", WHO Chronicle, vol. 27, No. 1 (Jan. 1973).

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health centres the coverage is much lower (about 10 per cent). Measles and polio vaccines have been considered too costly for wide use, but in fact are now within the budget possibilities of many developing countries with some external aid for supplies of vaccine. There are also other factors limiting coverage. One is the difficulty and cost of organizing a delivery network that guarantees the administration of a potent vaccine, particularly where this requires a chain of refrigeration to conserve a live vaccine (e.g. measles). Another is the need for mothers to bring children back to the health centre or assembly point for the visit of a vaccinator for a series of shots. DPT requires three shots. In Zambia, a country relatively well covered with health centres (1:8,000 population approximately) the country case study reports that of children taking the first DPT shot, only 40 per cent complete the series. (c) Treatment for malaria and other endemic diseases tends to be limited by the small proportion of the population having access to health centres.

Maternal and child health services

39. There is little need to discuss the fact that people need access to health services for proper maternity care and for care for their young children. Maternal and child health services are required as an instrument for better nutrition and for immunization, and to provide essential additional services. As explained above, immunizations against a number of children's diseases are commonly delivered, not in specific campaigns by mobile vaccinators, but at maternal and child health centres or through them. The mother will get her information about child rearing from the centre, which also may distribute food supplements to pregnant and nursing women and young children. The centre helps the mother with the surveillance of the growth of her child, and with treating the inevitable children's illness. It both supports the mothers[21] and provides essential medicines.

21/ On the reduction of child mortality to be obtained by helping mothers raise the level of their child care, see W. McDermott, "Modern medicine and the demographic disease pattern of overly traditional societies: A technologic misfit" in H.V.Z. Hyde (ed.) Manpower for the World's Health, a report of the 1966 Institute on International Medical Education. Evanston, Illinois: Association of American Medical Colleges, 1966.

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40. Family planning services are also given through maternal and child health services where it is government policy to provide them. The spacing of births and regulation of the number of births is needed for the health of the mother and of the children.22/

41. If an index of need for health services were required, it could be found in the recourse by mothers to traditional midwives and healers where other services are too far away (and sometimes because the mother feels more confident with the indigenous practitioner). Another indication of need is the widespread sale of modern drugs in countries where they are available in shops.

42. Coverage. Overall it is estimated that less than 10 per cent of the rural population of developing countries is within walking distance of a health centre, sub-centre or dispensary. The situation varies greatly from country to country and within zones of the same country. Among five developing countries, for example, the proportion of pregnant women attending a pre-natal clinic ranges from 6-43 per cent, and the number of infants attending a clinic within the first year of life ranges from 6-80 per cent.23/

Environmental sanitation

43. Environmental sanitation bears a direct relationship to infant and child health; particularly through diarrhoeas and worms. The Tanzanian case study, for example, reports for the Kilimanjaro District a high incidence of intestinal infections in children, particularly worms due to soil pollution. Other case studies (Ghana and India) comment on the poor state of sanitation in overcrowded shanty-towns

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22/ A.R. Omran, "Health benefits for mother and child", /From health and family planning/, World Health (Jan. 1974), p. 6 (Geneva, World Health Organization).

23/ N.R.E. Fendall, Auxiliaries in Health Care (Baltimore, Johns Hopkins Press, 1972), table VI-1.

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and slums. Obviously the problem becomes worse in areas of greater population density. The absence of latrines bears particularly on the comfort and health of women in areas where by custom they do not use the fields during the day. The provision of water from taps without drainage leads to inconvenience from mud, and also to puddles where the vectors of malaria and other diseases breed.

44. Coverage. In rural areas, over 90 per cent of the population have inadequate facilities for excreta disposal. In urban areas, it is estimated that some 30 per cent of the population are served by public sewerage, and some 40 per cent have their own domestic systems, leaving 30 per cent unserved.[24/]

Psychological needs in relation to the mothering person

45. Mothering persons are essential to the child's emotional, and even physical, maturation.[25/] An infant may languish and die if deprived of mothering, even if physiological needs are met. A toddler will survive, but many exhibit bizarre behaviour and are unable to relate to people. Primarily it is the mother whose interaction with the child is so intimate that for some purposes it is appropriate to think of "mother/child" as a unit rather than of the child alone. The child also affects the mother, and it is this two-way process that is fundamental for the child's ultimate growth and development.

24/ "Basic sanitary services", WHO op.cit. For a discussion of overcrowding and unsanitary conditions in slums and shanty-towns and their effect on child health, see the study presented to the UNICEF Executive Board in 1971, "Children and adolescents in slums and shanty-towns in developing countries", document E/ICEF/L.1277 and Add.1.

25/ J. Bowlby, Maternal Care and Mental Health, WHO Monograph Series No. 2, (Geneva, 1952).

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46. Just as the body needs food and water, the child's mind needs experiences that facilitate the first stages of intellectual functioning. At birth the child is helpless and it is primarily through the continuing mothering experience that he begins to perceive the world, develop sensory motor activity, become aware of self, socialize, verbalize and incorporate moral values. These early experiences provide the foundation for a child's subsequent development, and will affect such matters as relations with others, school performance, work skills (for example through his ability to adapt to changing agricultural technology and geographic mobility), and his enjoyment of life.

47. During the first two years the child needs a stable figure who is responsive to his pre-verbal communications. He needs to play with simple objects, to perceive relationships, to develop curiosity, and to feel secure in his relationships with family members.

48. The close infant-mother relationship and physical contact[26/] are thought to contribute to the advanced sensory motor development of the African infant during the first year. The African child sits, crawls, stands, and walks earlier than does the child in Western societies.[27/] As pointed out in paragraph 31, however, at about six months of age, when he begins to need a supplment to breast-feeding, he falls behind in his growth.

49. As the young child grows older, others share the responsibility for rearing. In many instances a sister or brother of about 7-10 years of age cares for the child after the age of 2 years while the mother works.[28/] However, the physical needs of the child still bind him psychologically to the mother, and he continues to be dependent upon her.

26/ In rural villages of East Africa, for example, the infant sleeps with the mother and maintains close body contact during the first two years.

27/ M.O.S. Ainsworth, Infancy in Uganda (Baltimore, Johns Hopkins Press, 1967), pp. 319-320.

28/ In slums and shanty-towns the young child may be left all day long in the street under the "supervision" of the older child. "Children and adolescents in slums and shanty-towns" op.cit., para. 114. The Tanzanian case study refers to the practice of mothers in the Moshu district of feeding the young child before leaving to work with the family and locking him in with a somewhat older sister until they return. /...

50. When the child is reared in an extended family network, often three generations living in one household or in proximity, the mothering role is shared with grandparents, relatives and older children. This is specially true in the rural areas. However the extended family has come under stress from urbanization and modernization, the substitution of governmental authority and services for patriarchal authority, and in urban areas from the lack of housing, and various economic factors. The nuclear family of parents and children becomes the norm.

51. Child-rearing in many places gives little attention to symbolic thought, cause-and-effect relationships, and motivation for learning. There is often a low level of stimulation, an absence of activities, and an emphasis on polite and submissive behaviour. This is particularly the case when there is under-nutrition, which in itself tends to make the child passive. These limitations are detriments to subsequent school and adult work performance, and development of the adult's potential.

52. The father. The role of the father is important. However, current evidence suggests that, particularly in rural areas, he generally plays an indirect rather than a direct role in rearing the young child, since he does not spend much time with him; he is more involved in his relationships with the mother and as head of the household. In some regions, inadequate work opportunities in rural areas results in a rural father going to an urban area looking for work, living in a shanty town and unable to return regularly to his family for lack of public transportation and money. A proportion acquire a new urban family. His absence affects the mother, and this is reflected in her activities with her children. There are countries in which up to one third of all families are headed by women.29/

29/ Helvi Sipila, "Third World Woman: master of her own destiny", UNICEF News, Issue 76 (July 1973), pp. 4-7.

53. Services and coverage. In this field, there can be few direct services, but literacy of the mother and the education available to her through such channels as extension services, clubs and communications media can give her essential support. "Mothers with little or no education usually are of families with low income, poor housing, deficient water supply and sanitary facilities, and without adequate pre-natal and other medical services".30/ The Pan-American mortality study from which this quotation is taken, draws the conclusion that education of the mother can be used as an indicator of many socio-economic variables. The present report argues in chapter III that it is also a practical means of raising the status and the knowledge of the mother. According to census data there were around 1970 some 450 million illiterate women in developing countries, amounting to 60 per cent of the female population over age 15.31/ With outstanding exceptions in a few countries, present campaigns to teach literacy are not of a sufficient scale to change this situation very much. The slow growth in the proportion of girls completing at least four years of primary school can change it. However, this proportion is quite low in rural areas, and adequate change through this means only would take many decades.

Demands on the mother

Romantic myths

54. There are myths still prevailing in the western world and the urbanized elite of developing countries, about the attitudes and preferences of the women in the rural areas of the poorer countries. These myths centre on the women's presumed stoicism and resignation to hardship. Thus many people accept without question the notions that women not only give birth and start working again in the fields the same day, but prefer or easily accept doing so; that they accept willingly the daily chores of walking many miles - infant on the back - to fetch water; the many hours of daily work in pounding millet; or the absence of any time for rest from all their back-breaking chores.

30/ Patterns of Mortality in Childhood, op.cit., page 349.

31/ UNESCO Statistical Yearbook, 1972, table 1.3; Literacy 1967-69, Progress achieved in literacy throughout the world (Paris, UNESCO, 1970)

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55. This form of "romanticization" of the lot of peasant or village women leads not only to ignoring their needs but to reinforcing traditional patterns that have become anachronisms in the light of social and economic progress in the very areas in which these women live.

56. The evidence negates the "happy stoic peasant" image of the woman. Where even primitive facilities are provided for deliveries, many miles from households, women try to get there. It is not only for midwifery help, but to have a rest of at least a day or two, which they would not have at home. Make a cart available for fetching water if there is no well nearby and it will readily be used, and mechanical arrangements for grinding grain are heavily patronized.

Women as workers

57. The vast majority of mothers in developing countries are workers, whether they live in rural or in urban areas, work full-time or part-time, work seasonally or through the year, work for wages or in self-employment on crops or handicrafts. In the rural areas, most mothers work; in Africa, women provide more than half of the agricultural labour. Generally they receive no wages for their work, much of which is devoted to subsistance farming. It is ironic that the general practice has been to provide technical advice in farming for men and not women, even where women have been doing most of the subsistence-crop farming themselves. In some societies the husband works the money-crop and may not share the cash from it with the mother. In the urban areas she works primarily in service occupations, and in unskilled industrial jobs for meagre wages.

58. In addition to this work, the mother continues with all her child-bearing, childrearing, and household activities. Modernization, while offering numerous advantages, also places increased stresses on the mother in adapting the family to new living conditions. In the towns and cities the mother in the recently arrived family usually bears the main burden of coping with the adjustments required by urban life and a cash economy.

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Beneficial women's programmes also make demands

59. In a number of countries programmes of education and training are being developed to offer rural mothers and out-of-school girls opportunities to acquire new knowledge, skills and attitudes in informal settings - through women's clubs, community centres and local self-help activities. In addition to being concerned with nutrition, health and better family living conditions and with community improvement these programmes sometimes try to increase the earning capacity of the women.[32/] Such "women's" programmes are being developed under a number of different auspices. Some are governmental, others voluntary, and still others mixed. In some countries there may be several such programmes under the auspices of two or three ministries or even different departments of a single ministry.

60. In addition, other ministries or departments with specialized interests, e.g. health, family planning, environmental sanitation, education, nutrition, agricultural and home economics extension may also be trying to reach the mother because they realize she is essential for the programmes they are trying to advance.

61. Their programmes, good as they may be in themselves, may present a fragmented approach in trying to involve the one family member - the critical mothering person for the young child - who works longer and harder than any other, who is generally illiterate and who has the least possibility of taking advantage of the opportunities being offered for information, education, and service.

62. A glimpse of the possibilities of lightening the excessive work of women is given by the recommendations made at the Lomé conference which included the following:

32/ A study of "women's" programmes in developing countries was presented to the UNICEF Executive Board in 1970 in "Assessment of projects for the education and training of women and girls for family and community life". This study and a summary of the Board's discussion of it is contained in document E/ICEF/Misc.169.

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- Arranging for a mother or girl to take care of the children of a group of families during the agricultural working day (village day-care group);
- Increasing water points, wells and standpipes or fountains (fetching water);
- Reafforestation of land near villages (wood-gathering);
- The organization of granaries;
- Distribution of light transport facilities for crops, water and wood;
- Distribution of equipment for fishing and fish drying and smoking;
- Providing communities with light machinery for pounding or grinding millet and grain.

63. The Lomé conference report stated that these methods should be applied generally. It pointed out, however, that as yet there were very few Government departments likely to promote them; moreover, some technical solutions have not yet been tested (e.g. convenient individual transport to haul loads).33/

64. Services and coverage. Home and village improvements may be promoted and assisted by agricultural extension services, community development, co-operatives, or non-governmental organizations. Usually, however, such services do not cover the country, and have little time for these activities.

Need for social welfare services

65. The care of the young child can be improved in part through family-centred social education as well as services such as day-care facilities for the children of working mothers; playgrounds; facilities for the treatment and rehabilitation of the handicapped; means for the care of orphans and abandoned children, and the children of destitute parents; and the protection of children suffering from severe neglect or abuse. In general, the volume of need for these services is not met because of lack of resources. From the point of

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33/ Lomé conference report, op. cit., Part I, 2nd Chap.

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view of numbers of young children affected, day-care is the most important, and it is included briefly in the present report. The others are only referred to in chapter III.

66. Needs for day-care. The need for creches and day-care centres is strongly felt by working mothers, those working in the fields as well as those in urban employment. Day care is especially needed where the mother has left the circle of the extended family. Facilities are far too few to meet the needs, usually providing at best for no more than 1 or 2 per cent of the age group. Where mothers cannot leave children in the care of a neighbour, they are left under the care of an older child, sometimes with freedom to go outside, or sometimes locked into the living quarters, where they are prone to fear, loneliness and serious accidents.

Financial limitations

67. Financial constraints have been mentioned a number of times in relation to lack of services. The budgetary limitations on countries with GNP per inhabitant of approximately[34/] $100 or less at 1970 prices are easily understood. Countries with more than this but with a GNP under $200, are near a threshold where it becomes easier to provide basic social services. The following table shows the number of such countries in each continent.

GNP per inhabitant (1970)	Africa	Asia	Latin America	Total population (millions)
	- No. of countries -			
Approx. $100 or less	15	14	1	1,057
$110 - $200	15	9	1	938

68. At the Lomé conference for West and Central African countries it was clear that a number of these countries face an understandable resistance to expanding the proportion of their government budget now goint to health, education and social services. The proportion of

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34/ The actual cut-off was taken at $110, because there are a number of countries with just over $100 GNP per inhabitant.

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current expenses going to services benefiting children, youth and women was approximately 20 per cent for several countries, and approximately 30 per cent for several others. These levels are often seen as ceilings, and in that case expansion of the governmental budget for services depends on expansion of GNP and tax revenue.

69. Some governmental expenditures for health and education are shown in table 1 to illustrate the situation. It is not the purpose of this table to make comparisons between countries; that is hazardous because of varying distribution of expenses between government, and local authorities and private financing which are not shown, and because of the distortion introduced by the translation of currencies into United States dollars. Nevertheless, it is clear that a low GNP limits the government capacity to raise taxes, and consequently to finance social services. To take the case of health services for the large group of countries with approximately $100 per inhabitant or less, in 1970 health services were typically provided for approximately $1 per inhabitant per year. The table also indicates, however, that a few countries do, as a matter of policy, make a special effort to provide a higher proportion of their budget for health services, and this can make a very important difference.

70. It may seem self-evident that with such a low budget, it is impossible to cover the country even with simple health services. In many cases most of the $1 per inhabitant is spent on hospitals mainly serving the urban population. The distribution of expenditure among different components of health services and different zones of the country is also significant. As this report discusses in chapter III,

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more could be done even with the present level of resources[35/] and as a further step, an increase in the level is thoroughly justified. Possibilities of effective low-cost health services will be examined in a report being prepared by WHO and UNICEF for the 1975 session of the UNICEF Executive Board on approaches to providing basic health services, particularly for mothers and children in disadvantaged areas of developing countries.

35/ Teachers and research workers in Makerere University, Uganda, have designed a model showing how it would be possible to cover a country with basic services at a cost of $1 per inhabitant. Maurice King (ed.), Medical Care in Developing Countries, (Nairobi), Oxford University Press, 1966), chaps. 1-3. These cost estimates were made in the early 1960s and probably $1.50-$2.00 would now be required. Models of this type have not been extensively adopted, possibly because of the emphasis on health centres and auxiliary personnel rather than hospitals, and specialist personnel - an emphasis which seems to conflict with the practice of the industrialized countries, the professional training of key people responsible for the services, the supposed expectations of the population, and various short-term political considerations.

Table 1

Per capita governmental expenditures on health and education

Per capita GNP	Year	Per capita GNP (1)	Per capita expenditure (2)		Per cent of total public expenditure (2)	
			Health	Education	Health	Education
($US equivalents)		($US equivalents)			(percentages)	
Less than $100						
Burma (revised estimates)	1971	80	0.66	1.60	5.7	13.8
Malawi	1971	90	1.09	3.09	4.5	12.8
Nigeria a/	1969	-	0.73	1.93	5.2	14.2
$100 - $199						
India (State Government) b/	1971	110	0.74	1.98	7.3	19.3
Uganda (voted estimates)	1971	130	2.07	5.27	7.3	18.6
United Republic of Tanzania	1971	110	1.60	3.46	6.3	13.7
Sri Lanka (provisional results)	1971	100	3.49	6.92	7.1	14.0
$200 - $399						
Colombia	1971	370	3.56	7.22	7.8	15.9
Egypt	1971	220	4.05	10.30	9.2	23.5
Ghana	1971	250	2.06	6.21	6.8	20.6
Guatemala	1971	390	...	...	12.3	18.3 (3)
Honduras (voted estimates)	1971	300	3.42	9.03	7.1	18.7
Morocco (Central Government) c/	1971	260	3.04	11.38	4.9	18.2
Philippines	1971	240	1.21	5.10	6.7	28.1
Thailand	1971	210	1.08	6.58	3.0	18.1
Zambia	1969	290	7.55	17.21	5.9	13.4
$400 or more						
Mexico (voted estimates)	1970	700	2.64	11.87	5.9	26.7
Peru	1971	480	...	...	6.6	20.7 (3)

Sources

(1) GNP per capita at market prices. International Bank for Reconstruction and Development. World Bank Atlas: 1971, 1972 and 1973.

(2) Mid-year estimates for population and exchange rates. International Monetary Fund. International Financial Statistics, February 1974. For public expenditures: Public Finance, United Nations Statistical Yearbook 1972.

(3) Economic and Social Progress in Latin America, Inter-American Development Bank 1972.

a/ Governments of Eastern States are excluded.

b/ Refers to State Government expenditures.

c/ Refers to Central Government expenditures.

... No data available.

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II. APPROACHES TO POLICY AND ACTION

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Summary

71. The object of this chapter is to clarify some general approaches before discussing the content of services and programmes in chapter III.

72. Table 2 lists hypotheses about the factors usually determining the situation of the young child. A young child policy has to adapt itself to some of these; its objective is to modify others. This chapter suggests that rather than promulgating uniform standards it is better to follow a developmental approach to improving services from their present situation, whatever it is. One objective is to seek the help of the community wherever its interest can be stimulated.

73. The present report starts from the problem of disadvantaged areas with few services, usually taking the example of rural areas. In such cases the best impact on the reduction of child diseases, handicapped growth or death will come indirectly from services to the community, the family and the mother (see table 3). At a higher economic level more direct and specialized services to children will be provided.

74. Services for children can more readily be improved in areas where some economic development is going on; but specific provision is needed to bring about this result; economic progress will not automatically "trickle down" to benefit children. Zones of the countries selected for development offer an opportunity for improving the situation of children at the same time. Making a special effort to improve children's services in development zones may temporarily

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strengthen the tendency for areas with poorer services to fall behind the rest of the country. Zonal development plans may be extended progressively to other disadvantaged areas, as quickly as the country's resources make this possible, in a phased development extending through several five-year plans.

75. A major administrative problem is the absence of channels from the central government to the community. As many as 12 ministries might be involved in one aspect or another of a child policy (table 4). Much more can be accomplished if the services provided by these ministries are arranged to be mutually supporting. A possible organization of planning is discussed, covering the planning commission and planning cells in the main ministries concerned.

Greater awareness and assurance that action is possible

76. Given a greater awareness of the special needs of the young child, and greater assurance that there are real possibilities of meeting them in some degree, much more can be done even in societies with limited means. Awareness may begin at any level, from parents who are concerned about the many deaths among their young children to a minister or high government official worried about the problem of food and nutrition. At the top level awareness is needed by planners and those formulating over-all development and sectoral policies and programmes.[36/] It is needed by the various professions, including those engaged in teaching and training activities and in research, by community leaders and by workers engaged in social

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36/ The country case studies and other available evidence show that all the countries are trying in a number of ways to reduce young child mortality and morbidity. A number, however, are doing little about the nutritional needs of the young child, particularly during the weaning period. One country - India - in preparing its 1974-1979 national development plan included a number of essential services to benefit the mother and the young child in especially disadvantaged areas of the country (slums, tribal, drought-prone, remote),

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programmes at all levels. It is needed by political parties, non-governmental organizations, and local village and neighbourhood groups. Awareness is also needed by the conveyors of information through mass media, which can often confer status and help enforce social norms. The radio is an especially important channel for communicating awareness in developing countries.

Factors to be dealt with by a young child policy

77. The first step in preparing a policy and programmes for young children is to consider what are the main factors determining the situation of young children, and to what extent they could be modified by programmes falling within the framework of such a policy. Since the nature of these factors and their relative importance differs to some extent from country to country, we have listed in table 2 a series of working assumptions for use in the assessment of any given situation. These factors fall into three groups insofar as concerns action for the young child: (a) some factors like the basic natural environment and ecology cannot be modified; policy has to adapt to them; (b) other factors, such as income distribution, can be modified by national policy, and may be very important in their effect on the young child, but normally a country would not undertake to modify them as part of a young child policy; and (c) among the rest it remains to select the key points for intervention in order to benefit the young child, e.g. the level of participation of the population in programmes, the financial resources provided and the models selected for organizing services can be major elements in a policy for the young child.

78. At this point the emphasis is on the content and limits of a young child policy, or which it is necessary to decide for working purposes in each country. However, a young child policy is an important component of over-all national policy (a) for the welfare

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Table 2

HYPOTHESES CONCERNING DETERMINANTS OF YOUNG CHILD SITUATION

Main factors determining situation of young child	Aspects to be considered within framework of a policy and programmes for young child
Environment, ecology, e.g. water and food availability, density of parasites and infections	Policy and programmes have to adapt to basic situation, e.g., hot, arid areas have specific needs different from those of warm, humid areas
Income level of parents: employment opportunities for both parents; women's work	Can be modified by general rather than young child policy
National income distribution - relative equality of population groups	Depends on general rather than young child policy
Density of population and road network	Transport network affects costs and accessibility of services, but would not be modified by a young child policy
Traditions, beliefs, culture, knowledge level of parents and extended family and taboos about child-care, nutrition, etc.	Programmes can raise knowledge level
Family size	Support of responsible parenthood and improving the status of women, particularly through social programmes, can influence family size. Support by family planning services
Level of patticipation of population in programmes	Programmes benefiting children are a good means of raising popular participation
Quality of services of village healers, traditional midwives, etc.	Training and co-operative arrangements by government services can improve quality
Stimulus of traditional life to young child	Policy can be concerned with preserving good values, especially where endangered by social changes, and with combining better child-care practices with existing customs
Financing and planning of government services - central, state and local	One of the main operational areas for children's policy re: amount of financing and the models for organization of services
Services of non-governmental organizations	Can undertake tasks not possible for governmental services and/or do pioneering work in areas not yet covered by the government

and development of children and adolescents, and (b) for economic and social development as a whole. It would be an important component of an attack on poverty, or a programme to meet minimum needs, for example. Many services to meet the special needs of the young child ideally form part of services for the whole community, e.g. basic health services, support for village and family food production. In fact services for the young child may constitute growing points for the development of wider services.

Indirect and direct services

79. A young child policy will obviously include services delivered directly to the child or the mother, e.g., immunization, a food supplement, a health treatment. However, as explained in chapter I, the welfare and development of the young child also depends to a very large degree on what happens to him in his family and home. It follows that very important factors of a policy for the young child will relate to indirect services that improve his environment, both in his home and outside of it.

80. The possibilities for improving the situation of the young child through indirect and preventive services is illustrated by a statistical study made by the Ivory Coast as part of its preparation for the Lomé Conference. Analyzing the causes of deaths in hospitals of children up to the age of five, it was found that 90 per cent could have been prevented: (a) by preventive health care (e.g. vaccination), (b) by action on the environment (e.g. clean drinking water supply or village production and use of foods required for the family); or (c) giving parents better knowledge about how to rear and care for their children (e.g. through literacy, and health and nutrition education).[37/] Thus indirect and preventive services could reduce the demand for medical

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37/ Lomé conference report, op. cit., Part I, 3rd chapter.

care at present largely unmet in most countries, to more manageable proportions. The direct and indirect services are complementary, and both are needed.

81. While indirect services benefit the community as a whole, and this is an added advantage, analysis of a given situation usually shows that many of them are among the most important measures that can be taken to improve the situation of the young child and, therefore, fully justified on that account alone. Table 3 lists examples of both indirect and direct action.

Step-by-step approach

82. In the past a good deal of attention has been given to trying to agree on reasonable standard levels of service which could be applied on a country-wide basis, or throughout the developing countries of the world. These standards have not been very widely applied. The difficulties of making the necessary budgetary provision for recurring costs and of finding personnel have been major obstacles. International agencies are now advocating that the varying resources and priorities of different areas should be important factors in deciding on the organization of services.

83. The approach suggested in this report is to adopt a policy of raising the level (the coverage and the quality) of existing services, whatever it may be. In practice, levels of service vary considerably among different areas of the same country. At each of the different levels there is usually scope for very desirable improvements. Instead of adopting an absolute standard, a policy for the young child could sketch out a process of step-by-step growth and improvement, and as many areas of the country as possible could

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Table 3

APPROACHES TO VARIOUS CATEGORIES OF ACTION FOR THE YOUNG CHILD

By community and Government	By Government primarily
Indirect	
Safe drinking water	Food and nutrition policy
Food production and storage (home and village)	Health and nutrition education
Non-formal education, literacy	Environmental sanitation
Home improvement (including latrines)	Education in primary and secondary schools on family life and child-rearing
Labour-saving devices (home and village)	Manpower planning and training of personnel
	Radio and other mass communications
	Income supplementation programmes
Direct	
Maternity care and family planning	Nutritional deficiency prevention (minerals and vitamins)
Health and medical care	Treatment and malnutrition
Weaning foods	Health and nutrition surveillance
Supplementary feeding	Immunizations
Toys and playgrounds	Endemic and epidemic disease prevention
Day care	
Pre-primary education	
Handicapped children	
Clothes and shoes	

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be encouraged and given help to advance to the next higher stage. It is possible to do this while at the same time having in view the reduction of the gap between the lower and higher socio-economic groups.

84. The step-by-step approach is better if there is also a longer-term perspective of objectives extending over several plan periods; this can serve as a framework for shorter-term improvements. The main point is to give more attention than in the past to the best ways for services to grow. In the present report this principle is applied only to services benefiting the young child, directly or indirectly, but it is applicable to services for the community generally. As stated in paragraph 78 above, young child services are ideally a component of community services, for which they can become the growing edge.

Responsibilities of the central government and local community

85. Generally it has not proven possible for an adequate expansion of services to be financed from the central government budget alone. It is, therefore, useful to identify the services that the people want in the light of their present knowledge, and to which they are prepared to contribute labour or cash. For example, people are usually interested in, and ready to pay something toward, water supply or maternity care; on the other hand, they may not understand the need for immunization until it is a well-established practice, and they cannot be expected to contribute to the training of personnel or the costs of supervision. Such activities have to be developed primarily by the centre (i.e., the central government or the federal and provincial governments). It is usual for communities

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to organize and finance day-care services, sometimes with the national government providing training of staff and setting standards. The experience of a few countries shows that the community can also contribute to such services as water supply, a village pharmacy, village improvement and literacy training. Table 3, in addition to illustrating the division between direct and indirect services, also separates those that could interest the community, in terms of local contributions, from services primarily dependent on a central or provincial government. This distinction is also followed in the order of discussion of programmes in chapter III.

Linkage between the centre and the community

86. Of course almost any programme of interest to the community requires some stimulation and technical support from outside. The community cannot participate in providing a service if it does not know that the service exists. Thus it is necessary for people to be made aware of possibilities for improving the situation of their children, and the aim should be to cultivate a continuously expanding range and area of interest in the community. The introduction of measures dealing with less-felt needs is based on success in meeting "felt needs". In this connexion information media, both modern and traditional, can play an important role.

87. The interest and participation of the community offer starting points. Where one improvement has been made, it is important to go on to another, with continuous support from the centre. Contributions from local communities will not be renewed unless they are seen as a component of sustained co-operation between local communities and public authorities in matters of concern to local communities. After an initial local response in respect of intensely felt needs, to get the local effort to continue and to grow, it is essential that there

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should be steady expansion in the services that become available to local communities.

88. It is also most important for the central and state or provincial government to have information coming upward from the local level about what the problems are, what the people want, and how programmes are developing. This subject is touched on below under monitoring (para. 116).

89. Even for a service in which the community is already ready to participate, a link is required with a governmental or non-governmental agency for technical support and for material assistance for items beyond the means of the local community. It is obviously easier for governments and external assistance agencies to support a standardized programme; it is more difficult to respond to local initiatives. It would be impractical and too costly to expect the centre to be able to respond to any local initiative, even a sound one, whatever it is. But at least assistance could be available for a range of types of programmes or services.

90. If the aid from the centre is to be used efficiently it is important to be able to support local initiatives rather than to equalize support to all communities, whether or not they are contributing themselves. This policy may have political difficulties, but emulation among communities is one of the important factors in the spread of better conditions.

91. As experience with community development has shown, the prevention of the bureaucratization of the link between the centre and the community is a difficult administrative problem. Despite the current atmosphere of discouragement on this administrative issue it is necessary to strengthen the development of links between the

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centre and the community along which information can flow in both directions.

92. Often it is also useful for non-governmental organizations to stimulate and support local participation. In different countries this is done by such channels as co-operatives, the social section of the political party or parties, women's clubs, social services, charitable and religious trusts or organizations, and training institutions through their field practice areas.

Ministries concerned

93. Many ministries have links to urban or rural areas that offer possibilities of contributing to the execution of a young child policy. The names and functions of these ministries differ in different countries, but table 4 provides a listing of the main possibilities. In federal States and in large countries, the functions listed will be divided between central and state or provisional levels.

Mutually supporting services

94. It is common sense that the many services and functions listed in table 4 will have more impact if they support each other. Health services will be largely frustrated if safe water is not accessible, or if there is not enough food. The limitations of sectoral approaches on the part of different agencies of government are nowhere more in evidence than at the point where several needs meet and become an organic whole - the mother and the child. It is often seen that the absence of mutual support has negative effects. A number of country case studies speak of there being too many demands on the mother, as each service expects her to improve her child rearing within its own field. There is a limit to the number of services a family can use effectively and beyond this the services become self-defeating.

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Table 4

MINISTERIAL RESPONSIBILITIES FOR SERVICES TO MOTHERS AND YOUNG CHILDREN

Urban	Urban/rural	Rural
	Planning and finance	
	Advocacy; planning; allocation of resources	
	Health	
MCH services (centres, maternities, hospitals, etc.); nutritional rehabilitation, nutrition clinics; supplementary feeding	Immunization and disease control campaigns; family planning; health education; statistical services	MCH services through basic health services, co-operation with and training of traditional midwives and healers, environmental sanitation
	Agriculture, commerce	
Milk policy; commercialization of weaning foods other than milk	Food and nutrition policy	Village food production and storage; home economics services; support of farmers' and co-operative organizations
	Education and universities	
Kindergartens; nursery schools; Ecoles maternelles	Literacy and adult education of women; parent-teachers' associations; school curriculum for girls; training of pre-primary education teachers-monitors; training; research; evaluation	
	Social services, social welfare, community development	
Orientation of mothers and parent education; social and neighbourhood centres and womens' clubs; consumer education; playgrounds; day-care centres; residential institutions; other measures to strengthen the family		Mothercraft/homecraft; animation rurale; bienestar rural; foyers féminines; play groups
	Interior	
		Co-ordination and support of technical services within district or prefecture
	Local government, urbanization and housing	
Clean and safe environment; housing; playgrounds, etc.; local services		Support of local participation in services of interest to the community
	Public works	
	Drinking water supply; roads and transportation	
	Industry, labour	
Factory provision of crèches, day care, health education		
	Justice	
	Legislation covering paternal responsibility, protection of children, and women's rights; special family courts	
	Information	
	Use of various media directed toward mothers, the public and the professions	

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While ultimately the integrated use of services occurs within the family, the community may greatly facilitate this by providing for integration of the services at the point of delivery.

95. Co-ordination. Without a heavy machinery of co-ordination the following steps may help to promote mutual support among the various services:

(a) Policy. The existence of a policy for the young child will help each ministry to play its appropriate role. The machinery for preparing a comprehensive policy is discussed below under "Planning for the young child and national development" (paras. 100-108).

(b) Combination at delivery point. Whereas it is useful to have many special services at the centre, a number may be combined in their approach at the community level. In their nature, sectoral programmes derive their resources and authority for delivery from the higher levels of the administration. Greater decentralization of execution within each sector will help to maintain the sectoral structures at the national level while giving the district prefectural, or municipal level responsibility for local political decision-making, as well as co-ordination and execution, thus producing comprehensive services at the local level.[38/]

(c) Geographic distribution. Attention to the geographical map of distribution of services that should be mutually supporting will make possible their synergistic effect.

38/ The Tanzanian case study points out that the decentralization of many of the sectoral activities by transferring authority for execution of programmes from the national to the district level has made possible increased participation of the local community, especially in the Ujamaa villages.

This principle should not be pushed to the point of conflict with the encouragement of local initiative. However, a good deal can be accomplished by directing the resources of persuasion, technical assistance and material support to encourage the establishment of services that really need to go together. (Geographical distribution is referred to again below in paragraphs 109-113.)

(d) Multiple use of administrative channels. In the light of the absence of sufficient links between the centre and the community, it is frequently desirable to make use of the links that do exist for several services. A country with a limited budget for social services cannot provide every service with a direct link into the community. New programmes and new functions should not always require new channels, but could be carried by adding to existing programmes. Thus, in Brazil, a rural development bank (ABCAR) got involved in agricultural extension and then in community health services. From the point of view of its function the maternal and child health centre is ideal for the accretion of services benefiting the young child. In Panama, for example, the Ministry of Health became concerned with village-level food production for family use. However, the school network is usually the most widespread, and it is sometimes used to tackle problems of young children through the parent-teachers association, and through teaching school children to help their younger siblings. In general this opportunity seems to be under-used, perhaps because a number of attempts have been disappointing. This may have been due to the fact that the teacher was expected to undertake a good deal more responsibility without any additional training or remuneration./...

(e) Information to potential users. Since the final integration of services takes place in the user-family, programmes of information to potential users about available services can raise their awareness and improve their selection of appropriate services. There will then be popular interest in improving the accessibility of services.

Local participation

96. The basic needs of the mother and the child during his first two or three years, and the developmental needs of the child in the pre-school age-period, call for a variety of formal and informal working arrangements at the community level; these should be built up progressively. They involve close co-operation among local institutions, leaders, and organized services, and promotional and educational work undertaken by a wide range of public authorities.

97. In many places, neither the people nor the organized services are yet ready for the roles expected of them. Education and reorientation as well as more systematic training of workers have to be carried out all along the line until the local community as a whole is reached, and through it, the family, and especially the mother. This is best done through community leaders who have the ability, natural or acquired with experience and education, to understand new messages and pass them on to the people in terms that they understand. The identification and training of leaders at very early stages of the process of community stimulation and the use of information media can be instrumental in winning the people to the idea of change. The messages that these leaders carry are related to actions that require communal acceptance or, at a later stage, active participation. Since the process envisaged is one of progressive growth, only one or two priority messages should be carried at one time.

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98. Local participation means, as a first step, active involvement in making and implementing decisions of immediate concern to the community. Even where few local resources are available for support, people should participate in the development of services that will affect the daily lives of their families. This will improve the efficiency of the services and lead people to make greater use of them. Whether we consider maternal and child health, nutrition rehabilitation, literacy training or day care, we observe that social services or social programmes that are sponsored or developed, as it were, externally, usually stop short of an effective delivery to those most in need of them; nor are the potential recipients prepared to receive the services or to use them to maximum advantage.

99. Community development programmes have often been accompanied by the strengthening and elaboration of local government. But it frequently happens that local government is not drawn into the extension of services benefiting children. This appears to be a source of weakness. In some instances local committees and child care councils are established that are solely devoted to children's services; their functions may include both advocacy and action, they provide a linkage between social services and the people, and they help to bring about a convergence of programmes affecting mothers and children.[39/]

Planning for the young child in national development

100. Government action to improve the situation of the young child will be more effective if it is included in the national development

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39/ The Burma case study refers to local committees, which include the representatives of trade unions, co-operatives, party units, and government departments, and are directly involved in the management of day-care centres.

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programme.[40] National development plans have usually proceeded on the implicit assumption that, in providing for the population as a whole, the needs of children, even of young children, will also be cared for sufficiently. This approach does not take account of the vulnerability and large unmet special needs of young children and pregnant women and nursing mothers, discussed in chapter I.

101. Reciprocally, a young child policy strengthens the national development programme. It delivers benefits to the population in areas of great concern to them, and raises the level of living directly. It contributes to the reduction of poverty, meeting minimum needs, and greater equality of income distribution. In the longer term, it contributes also to a larger GNP by making the rising generation more productive. Hence a central issue in planning concerns the importance given to the well-being of the child and the mother as an integral part of the design of development being followed by a country. The theme itself is too new for clear-cut priorities to have emerged in general practice. The developing countries have been preoccupied, inevitably, with many urgent and pressing problems. Ensuring the survival of the child and of the mother has obvious priority, but the time has come now for concern with the child's further development. This of course has important implications for several sectors, notably for those bearing on health, food and nutrition, social welfare, rural and urban planning and community development, as well as income distribution and employment.

40/ Hans Singer, Children in the Strategy of Development. Prepared for the United Nations Centre for Economic and Social Information and the United Nations Children's Fund. Executive Briefing Paper 6,(New York, United Nations (CESI/E.12), 1972).

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Main groups of concern

102. In a country with a birth rate of 40 per 1,000 population[41/] - a common rate for developing countries - the age groups of concern to a young child policy are approximately as follows at any time:

Women	Per cent of women in reproduction age group	Percentage of total population
Women in the reproductive age group (15-44)	100	23
Pregnant women in last trimester	4	1
Nursing mothers (of infants up to age 6 months)	8	2
Young children		
Infants aged up to 6 months		2
Infants or toddlers aged 6-24 months		5
Young children aged 2, 3 and 4		9
Total under 5 years of age		16
Young children aged 5		3
Total under 6 years of age		19

103. When stating these approximations as whole-number percentages, it is not possible to reflect precisely the decreases in succeeding age-cohorts due to mortality, but the above general magnitudes show the importance of a young child policy for:

41/ A lower birth rate over a period of years would reduce the proportions cited. For a rate of 30 per 1,000 the reduction would be by one quarter.

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(a) Those pregnant and nursing mothers most in need of special services. The underlined phrase reduces the number, here taken as 3 per cent of the population, and represents a simplification that should not be misunderstood:

(i) Even the poorest country could offer certain services during the first two trimesters of pregnancy, e.g. a check-up, iron supplementation to those within reach of its health network. The problem is rather that women do not come to the health services during the early stages of pregnancy; more will come during the second trimester. In the last trimester, which forms part of the "perinatal" period, there is a greater need for surveillance and services. At a later stage of development, a country would try to reach all pregnant women. Altogether 3 per cent of the total population, and 13 per cent of the women in the reproductive age, would be pregnant at any one time. (This does not count pregnancies ending in foetal loss from natural causes, which is much higher in developing than industrialized countries.)

(ii) At a later stage, nursing mothers would be kept under surveillance for the whole period of breast-feeding, rather than six months. Taking account of the three trimesters of pregnancy, and breast-feeding up to 24 months would cover 10 per cent of the total population and 43 per cent of women in the reproductive age group.

(b) Infants and young children under six years of age, constituting 19 per cent of the population. Conventionally statistics show infants up to the age of one year. Here the break is taken at six months, because feeding of other foods, in addition to breast milk, should begin at four to six months of age, and risks of malnutrition and illness are greatest from then on until the age of two. With the decline in breast-feeding, this stage may begin even before four months in specific countries or zones of countries. Six months is taken as a global average.

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104. If the objective of improving the situation of the young child is approached from the point of view of where mortality can be most effectively reduced, the two key periods are birth (reduction of maternal and neonatal mortality), and from the beginning of weaning up to two years of age. These are critical both for survival and the development of the child. Although mortality is high at these periods, the means are available to make substantial reductions within developing countries.42/

National planning machinery

105. A significant degree of correspondence is required between the welfare and development needs of young children and the larger scheme of national, social and economic development.43/ Two aspects deserve to be emphasized. First, the development of human resources should come within the inner core of the country's planning process. Secondly, the planning agency should be given a central role in planning for the use and development of human resources. Given these two conditions, it becomes much easier to undertake further co-ordination and dovetailing in planning for the young child. This has to precede co-ordination in detailed execution at the national, regional and local levels.

42/ An excellent analysis of young child mortality in the Americas, useful from the point of view of action to reduce it, is given in Patterns of Mortality in Childhood, op. cit.

43/ This is discussed in some detail in Children and Adolescents: Priorities for Planning and Action, (United Nations publication, Sales No. E.73.IV.19); this study was presented to the UNICEF Executive Board in 1973 in an earlier version in document E/ICEF/627.

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106. In the planning organization, taking account of the young child is usually handled by the social division. A number of ministries - health, education, agriculture, interior - also handle different aspects of the plan, in relation with the Planning Commission. Where these ministries have a planning unit, the work is facilitated.

107. An important step is to equip the country's planning organization so that it is in a position to guide planning for the young child. As a rule, national planning organizations are much less equipped in the area of human resources and social development than they are for economic planning. The data available are far more scanty, and it is necessary to draw directly on the knowledge, experience and wisdom of different groups of people. On the one hand, regional and local views are particularly important in matters so important in family life. On the other, a wide range of professional views are needed from administration, public health, agriculture and nutrition, education, social work, psychology and mental health, and sociology.

108. How to bring experience and knowledge from these different sources to bear on the processes of decision-making, resource allocation, and implementation with which responsbile government agencies are concerned, is substantially an unsolved problem. The necessary people are found in ministries and district offices, national and regional research and training institutions and political, co-operative and other non-governmental organizations. Their advice may be channelled through committees attached to the planning commission or to ministries or to a children's bureau or foundation. Sometimes they form part of a larger system of consultation on social services. Consultation may be supplemented by contracts given to institutions for preparing reports and recommendations.

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Experimentation is required to find satisfactory ways of co-opting the knowledge and advice that may be available, or can be developed, within the country.

Geographical distribution of services

109. It would be a reasonable policy for the Government to be ready to support the improvement of services in any part of the country where this is possible, through the provision of general directions, technical services and the training of personnel. To reduce the gap between richer and poorer areas of the country, the Government would give additional help in the poor areas. This would take the form of subsidies, more generous supply of materials, additional technical support, and building up the necessary infrastructure, on a larger scale than for the better off areas. Analyses of the governmental and semi-governmental resources going into different areas of the country will often show that the areas already better off are getting more, even though this is not a governmental policy.

110. It is usually difficult to improve social services in an area unless there is also economic improvement. Often, however, economic improvement does not carry with it any improvement in social services, and the assumption that it does is a mistake to be avoided. Therefore, wherever there are zonal development plans, it is logical and necessary to make provision for better social services. The growth of income in these areas offers a unique opportunity for improvement of the situation of mothers and children.

111. A very poor country may be unable to do more than start improvement in a particular zone that offers the best prospects of a good response, though this means leaving other parts of the

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country behind until it is their turn to have a zonal development plan. The commitment to cover the whole country is important; it may be given on a phased basis extending through a number of development plan periods.

112. A better-off developing country can accelerate such a process. It has more resources of finance and personnel that it can channel into the economic and social development of disadvantaged areas. At an appropriate stage it can commit itself to helping all its population to meet their minimum needs.

113. Evidence of trends in the latter direction from country studies and programme examples investigated for the present study has been encouraging to a limited degree. Generally, the more backward regions are beginning to draw greater attention in schemes of national development, especially in the better-off of the developing countries. As examples of this trend, we may refer to the northeast region of Thailand, the Mindanao region in the Philippines, and policies for the development of higher plateau regions in Peru. The beginnings of integrated development, combining systematically a variety of social services and economic measures, can be discerned but these are yet only the beginnings. On the identification not of geographical areas, but of groups whose children are brought up, mainly for reasons of poverty, under conditions of deprivation, there is yet too little to report. In a few countries, as in the Philippines, welfare agencies identify "needy groups" and seek to supplement services available to them, but a broader developmental approach to disadvantaged groups is harder to find.

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Appraisal, evaluation, and data gathering

114. Several activities that go under the broad name of "evaluation" can contribute to the improvement of a plan and programmes for the young child. Firstly, a prospective appraisal can be made of the situation, and of possibilities for effective programme action.

115. Secondly, the objectives of the programme should be stated wherever possible in operational or measurable terms. The plan of operations for the programme should show its logical framework - what inputs are expected to lead to certain outputs that, in turn, are expected to serve the objectives of the programme.

116. Thirdly, it is most useful to provide for feedback and monitoring of the programme. The object is to avoid a too common occurence, namely, a new programme launched with enthusiasm; after some time discovered to be a disappointment and neglected or abandoned; and another new programme launched in its stead. In the simplest terms, monitoring would mean a yearly or quarterly report - operational rather than financial or administrative - rendered promptly to the next supervisory level. Monitoring provides each operating level with information to improve the programme. It requires a delegation of authority to each level - state, district, municipality - to deal with a substantial proportion of the problems raised. A reporting system of this type can contribute to correcting programme activities and removing obstacles.

117. Finally, every few years a retrospective evaluation report may be made within the ministry. There is also need for less frequent evaluations that are external and independent of the system of implementaion. They may be undertaken, for instance, through competent but autonomous evaluation units within the administration, or through universities and research institutions.

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118. Statistics. The lack of statistical data for taking account of the young child in planning is widely felt. As in the programme fields, step-by-step improvements are possible, especially when related to programme needs. It is important to make specific financial provision for this process. Amongst the most useful possibilities to exploit are:

(a) Where the statistical office is making household surveys the insertion of a few questions relating to the situation and needs of the young child;

(b) Administrative data in the ministries that are usually not being exploited - number of points of service, training of personnel, etc.;

(c) Unanalysed census data. It is particularly important to break down national totals or averages into operational areas, e.g. urban modern sector, slums and shanty towns, rural cash crop areas, rural subsistence areas, development zones;

(d) Special studies may be commissioned for one or more representative areas. Training institutions may be able to undertake such studies while giving field practice to their students;

(e) Improvement of vital statistics is a priority for many countries. This should include the extension of the area in which births and deaths are registered, and improvement of the quality of the statistics;

(f) Inclusion of indicators of change in the system of statistics, in order to help monitor the effectiveness of a young child policy and its components. Most of the items mentioned above can contribute to this if arranged to include comparable data for successive periods. The programme discussed in chapter III can also contribute, e.g. in nutrition surveillance.

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III. POTENTIALS FOR DEVELOPMENT OF SERVICES OR PROGRAMMES

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Summary

119. This chapter discusses various measures that can be taken in developing countries to improve the situation of the young child. They are considered from the point of view of policy, with indications for and against particular steps at different stages of a country's development. Technical information is generally omitted because it is available from other sources, some of which are indicated in footnotes.44/

120. Services are considered in a development sequence, ranging from the simplest to the more elaborate. The distinction is made between services most communities already know about and will participate in, and those for which the government has to take the predominant responsibility, at any rate, until the community comes to realize their value. This distinction affects the method of approach and order of development of services relating to water and sanitation, food and nutrition, and maternal and child health.

121. Particular attention is given to services supporting the mother because they tend to be neglected. Literacy training appears to be one of the best means to raise her status, to strengthen responsible parenthood and to improve the quality of care given to children. At the same time, it is necessary to reduce the excessive and time-absorbing workload the mother carries, and various possibilities for doing so are discussed.

44/ Naturally it is not UNICEF's role to endorse all the information and recommendations given in the works referred to; sometimes the references present differing points of view.

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122. At the end, the chapter lists a number of subjects that have not been treated in the study and also priority areas for field research.

A basic approach

123. Some fundamental weaknesses have marked efforts to improve the situation of the young child in both industrialized and developing countries. Basic needs that are inseparable in real life are often met in ways that are fragmented, sectoral, and removed from the family and the community. Moreover, the physical and social context has not been sufficiently taken into account in the organization of social services. These difficulties are more serious for developing countries because of their shortage of resources, but industrialized countries are also trying to overcome them.

124. Viewed as a whole, the basic developmental needs of early childhood require three action components: education, prevention, and remedial or curative services. Only as these three components come together at a point of delivery and clearly within the reach of the concerned family, will the well-being of the young child be improved.

125. Programme development is part of a process of social change that affects the community institutions as well as the people who use their services. In considering various potentials for programme development, it would be of considerable advantage to view them as dynamic elements in the context of the local situation, rather than mechanically or administratively as technical issues. Each country will, through the planning process, determine the direction and content of its programme development, within the limits of available resources. A concern for the young child does not imply reliance

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solely on direct services, as these are limited with the present state of resources, knowledge and technology.

126. Similarly, a great deal can be done by the local community using its manpower and limited cash resources both indirectly and directly to improve the well-being of the family. Programmes that affect the family, particularly the mother and the children, need local acceptance if they are to be used well.

127. Chapter I referred to the importance of securing the collaboration of community leaders. They may be the traditional leaders, political leaders, or leaders selected for dealing with family and social services. For example the Brazilian Association of Credit and Rural Assistance (ABCAR) works through municipal boards and community councils. It asks villagers to select leaders (men and women) to whom it gives a brief orientation and then supports them through regular contacts by its field staff.[45/] In Guatemala the health "promoter" is selected for training in consultation with community leaders.[46/] In the United Republic of Tanzania the block and unit leaders of the political party help with social education and services, and in a pilot project in Cebu, Philippines, a unit leader system that was useful for village security is being revived to provide health and nutrition education and services.[47/]

45/ H.C. Hannann, Importance of Health Council Members' Roles as Perceived by Extension Agents and Council Members in Santa Catarina, Brazil. Madison, Wisc., University of Wisconsin, 1971. Master of Science thesis.

46/ E.C. Long, and D.A. Viare, "Health Care Extension using Medical Auxiliaries in Guatemala". The Lancet, Jan. 26, 1974.

47/ F.S. Solon, "An approach to reaching the pre-school child in a village level situation", unpublished manuscript.

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128. In the following sections, we do not seek to give technical recommendations concerning services and programmes, but only to indicate approximately what they can do, and, where information is available, the range of costs in 1973. We have tried to start with the simplest services and move on to the more complex. This may suggest the steps of a process of growth or development of services, but we believe that each country should choose the order it wishes to follow, allowing flexibility and giving considerable weight to the views of the populations to be served and the contributions they are willing to make. We have tried to indicate which services are likely to be wanted by people in advance of their being available to them, and which would have to be mainly financed by Government because their benefits, though great, are less recognized or because their cost or management are beyond the capacity of the community to participate in.

129. This approach results in an order of presentation that sometimes differs from one based on the impact and benefit of each service (e.g. for the different components of child health services). In a country with services in the capital and an infrastructure extending down to district offices, the problem of areas where there are few or virtually no services offers a logical starting point. Further, this is the situation of vast areas of the world. How to proceed in such areas is becoming of more interest to countries with policies of meeting minimum needs, fighting poverty, helping disadvantaged groups, or bringing the more remote rural population into the stream of national development.

130. In UNICEF, the Board has asked for priority to be given to projects assisting children in disadvantaged areas, and the World Bank has often drawn attention to the needs of the 40 per cent of the

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population in the lowest socio-economic classes. A United Nations leadership may think of this discussion as applying to the "least developed" countries. It also applies generally to the disadvantaged areas of all developing countries, which are inhabited by a large population.

131. While the discussion of organization of services applies to disadvantaged areas generally, the countries better off than the least developed have more resources of finance and personnel to put into their disadvantaged areas. They can deal with more of them at once, and help them to advance more rapidly. Countries with more resources may decide to install more elaborate services from the start. Each country chooses the degree of elaboration of services it wishes to install. However, this report suggests as a criterion that the level chosen should be capable of wide extension, in some cases through interlocking with existing services.

132. In general, in this report the higher levels of services are treated more briefly than the starting levels. This reflects no point of view that they are less important - on the contrary. However, more information about them is available elsewhere.

Safe and sufficient water

133. Water is listed first because of its importance for child health, and for the mother, and because its convenience is appreciated by villagers even if lack of safe water is not recognized as being responsible for poor hygiene and disease. For the family, particularly the mother, nearby safe water in adequate quantity is one of the primary labour-saving devices that she needs.[48/] In some countries,

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48/ See chapter I, paras. 26 and 27.

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water haulage by hand carts or animals is used, but cost of water delivered by vendors is usually high for small quantities of water, and an increase in the quantity of water used is an important factor in improving health.

134. In many rural water supply development schemes, villagers are invited to contribute labour and sometimes materials to the digging of wells or the laying of pipes. The Government supplies technical direction, elaborate equipment if required, and sometimes scarce materials (cement, iron reinforcing rods). The Government should also provide health education. When water supply is left solely to the Government, the local community may assume no responsibility, which leads to frequent breakdown of equipment, lack of adequate maintenance, and contamination.42/

135. Household water is also first in another sense. Villagers who have co-operated successfully in installing a water system may be ready to go on to a widening circle of health-oriented and other co-operative self-help community efforts, such as family food production, reforestration for domestic fuel supply, local support of health and education services, home improvements, sanitation, etc.

42/ The Yemen case study points out, for example that a 1972 survey in Sana'a found that as many as 80 per cent of the water sources used for domestic purposes were contaminated owing to lack of well covers and unwashed water buckets. At the Lomé conference it was reported that in dry areas many new wells become contaminated within about nine months because of lack of cover, concrete platforms, and sanitary measures. In many Asian countries, this is avoided by closing the well and supplying a hand pump, but owing to the same absence of popular understanding and participation, it is allowed to stay out of repair and people have to go back to polluted surface water.

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136. In the last ten years, technological progress has lowered the cost of safe water. The number of dry wells can be reduced by new hydrogeological techniques, including remote sensing by satellite, which is being explored in India. High-speed drilling rigs can bore through rock in a few days (e.g. 150 ft. of hard rock in two days) where artisan methods would need as many months. Plastic pipe is coming into use in Bangladesh and elsewhere, for lining tube wells, and it is used in other countries for reticulation systems. It is cheaper, easier to join, and much lighter to transport than iron pipes.

137. Where high-speed drilling is used in rock country, the capital cost of drilling and casing a well serving 200 people is of the order of $10 per foot,[50/] for example, $1,500 for a 150 ft. well. To this it is necessary to add about $200 for a deep-well hand pump, or some $300 for an electric pump. In easier conditions, a well in the soft earth of delta country can be put down by artisans. In Bangladesh it costs about $50 for sinking and casing, and the shallow hand pump costs about $15. External aid is often available for capital costs. Recurring costs would be some $2 to $3 per year for repairing plastic plunger-washers for hand pumps, some $200 per year if a motor pump is used for deep wells. This latter sum would

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50/ Prices quoted throughout the report are based on 1973 conditions.

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represent $5 per year for each family using the well.[51] A hand pump is sufficient for a shallow well.[52]

51/ An example of the effect of a simple labour-saving device provided by UNICEF, coupled with a community effort and local financial support to reduce women's work in the village, is given below:

A typical village in eastern Africa with 70 families totalling 450 people depended on water from a stream about a mile distant and 350 feet below the village, but inaccessible to the animals. Each family had one or two cows needing at least 15 gallons of water each day. The women carried water in four-gallon kegs or cans, walking down to the river and trudging back, three to five times each day, each round trip requiring about one hour. The villagers agreed to pool efforts and resources to establish a simple water supply storage distribution system for the village, school and market, based on a UNICEF-supplied hydraulic ram and pipe. A water ram, with capacity to lift 750 gallons per hour, 320 feet, was provided at a cost of $300, together with 3,000 feet of pipe to feed a 10,000 gallon reservoir, and 4,000 feet of pipe with fitting and spring-loaded taps for 20 standpipes and four watering troughs. The total cost: about $2,500. Locally procured materials for the headworks and installation of the ram and piping added $600 provided from local Government development funds. The villagers arranged for a loan of about $400 to cover the costs of materials for construction of the sand-filter and reservoir, which was built by the villagers. Their donated labour input was valued at $700. The total cash investment of about $4,500 is equivalent to less than $9 per person in the village, for a system expected to last for 30 years, which could be amortised for 30 cents per person per year. The repayment of the loan taken out by the villagers collectively involved a charge of less than half a shilling ($US.075) per month per family. Since the system requires very limited maintenance, the annual cost per family has been less than 10 shillings ($US 1.50) - a small charge for relief of the women from 1,500 hours of hard work each year.

52/ For further information see E.G. Wagner and J.N. Lanoix, Water Supply for Rural Areas and Small Communities, WHO Monograph Series, No. 42 (Geneva, 1959).

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Food and nutrition[53/]

138. After a community has got itself a safe water supply, there is an opportunity for continuing the process of community improvement by going on to deal with more complex subjects such as shortages of food, or the provision of health and educational facilities. This section deals with food and nutrition; supplementary feeding and the treatment of malnutrition and taken up under "health". In accordance with the general plan of this chapter, the section begins with actions in which the community might be ready to participate, and then goes on to what are called "primarily government responsibilities" because community participation cannot be expected. Some of the latter are of the greatest importance, and would have been listed first if another approach had been used.

139. The higher prices of staple foods, which rose rapidly in 1973, will probably continue for a number of years. While this will bring a welcome increase in income of some cultivators, landless labourers and low-income urban and peri-urban dwellers will be under greater pressure to get enough food. It was already the case in India that among the poorest,30 per cent of the population, 80 per cent of their income is spent on food, and similar conditions are found in many other countries. In such circumstances, a rise in the price of staple foods causes severe problems of family nutrition.

Village production

140. It is logical to suppose that villagers, in response to this situation, would be even more interested than in the past in village-level food production for family needs. Government actions to help

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53/ A brief review of the effect of inadequate food and nutrition is given in chapter I, paras. 28-34.

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then could include:

(a) In countries with population pressure, wherever there are numerous families without access to land, arranging for communal or individual allotments for food cultivation;

(b) Widening the scope of agricultural extension services, which have often been concerned only with cash crops for export, to advise on family food production. The assistance available from agricultural banks and co-operatives may need to be similarly widened;

(c) Using information media to alert and educate the population.

Village storage

141. Another aspect of immediate concern to villagers is food preservation and food storage. Ten to 20 per cent of their food is frequently lost between harvests.[54/] This contributes to the "hungry months" before the next harvest comes in, which are a period of particular difficulty for the young child. Technical and material help in this field could be one of the faster ways to increase village-level food supply. There is a large gap between what could be done and what is being done to improve storage at the farm level. Suitable procedures that are both technically and economically feasible can be developed and the extension worker must be convinced of the profitability of adopting them before he offers them to the villagers.

54/ Handling and storage of food grains in tropical and sub-tropical areas, FAO Agricultural Development Paper No. 90 (Rome, 1970). Food storage manual, (Rome, World Food Programme, 1970); Tropical Stored Products Information Reports, No. 20 (1970) and No. 24 (1973) (London, Tropical Products Institute). The Malawi case study reports a 20 per cent loss of food staples because of storage difficulties.

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Applied nutrition

142. UNICEF, FAO, and WHO have been assisting projects to encourage local and family food production especially for the requirements of children and mothers, under the name of "applied nutrition", in some 60 developing countries.[55/] In many of these, they have remained at the pilot level, recognized as correct in principle but often needing revision in implementation. Applied nutrition is an application of community development and has suffered from a certain discouragement in that field in recent times. A general problem seems to have been that such schemes were correctly introduced as a supplement to the government food policy, but often without any local consultation or local participation in the design of the projects. Many of the foods chosen for introduction at the village level (milk, eggs, poultry, fish) were too costly for the villagers to eat and, for the most part, could only be sold, bringing a useful addition to income but contributing only indirectly to family nutrition. An Indonesian evaluation suggests that food legume and maize production should come well before promotion of animal protein sources in that country.

Weaning foods

143. There is some demand for weaning foods, more in urban than in rural areas. That breast-feeding should be encouraged is discussed below, but from the age of four to six months on there is a need for adding other food. Milk powder and other commercial children's foods are too expensive for most families, but they may buy small quantities and dilute them, a practice that causes a significant proportion of the cases of undernutrition. To help meet this situation a number of countries have launched the production of a weaning food that could be sold at a lower cost, based on cereal-legume mixtures

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55/ Planning and Evaluation of Applied Nutrition Programmes, FAO Nutritional Studies, No. 26 (Rome, 1972).

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(Algeria, Colombia, Egypt, Guatemala, India, Iran, Morocco, Tunisia, Turkey). UNICEF, FAO, WHO and the Protein Advisory Group of the United Nations System (PAG) have done a good deal of work to assist this.[56/]

144. As mentioned above, the main market is likely to be in urban areas, and to reach needy families, the weaning foods have to be put on sale through health centres, pharmacies, co-operatives, low-price food shops, etc. at a price subsidized by the Government.

145. The needs of more families can be met, especially in rural areas, by helping mothers to prepare weaning mixtures from foods available to her. This is partly a question of education. The PAG has published a manual on feeding infants and young children[57/] which provides basic information to workers in developing countries for working out appropriate recipes and educational programmes. The health services need to train and employ suitable personnel at various levels and to provide essential support for this work, including kitchen units for recipe development and training. Suitable low-cost utensils, for example, sieves, should be provided for demonstration centres and made available in the markets. The difficulties of home cooking and milling some legumes, especially soybeans which are the most nutritious, can be greatly reduced through installation of village grinding mills (see para. 202).

56/ Max Milner (ed.); Protein-enriched Cereal Foods for World Needs, (St. Paul, American Association of Cereal Chemists, 1969); B. Wikstrom, Marketing of Protein Rich Foods in Developing Countries, New York, PAG Guideline No. 8, "Protein-rich mixtures for use as weaning foods", PAG Bulletin No. 12, 1971; E. Orr, The Use of Protein-rich Foods for the Relief of Malnutrition in Developing Countries: an Analysis of Experience (London, Tropical Products Institute, 1972) (Publication G73).

57/ M. Cameron and Y. Hofvander, Manual on Feeding Infants and Young Children (New York, PAG, 1971).

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146. In addition to wanting more food, villagers are interested in obtaining treatment for children who are ill from malnutrition. The causes are usually not recognized, and approaches to this are discussed below in the section on health (paras. 150-190).

Primarily government responsibilities

147. Food and nutrition policy. A basic government responsibility is to have a comprehensive national policy for food and nutrition. This policy should be not only for the population as a whole, but take account of the proportionately greater needs of growing children for food and for protein, vitamins and minerals.

148. Food supply, food demand and biological utilization of foods, represent the three macro-variables to be taken into account in the formulations of a national food and nutrition policy. In the general framework of such a policy, special measures would be proposed for dealing with the particular problems of vulnerable groups. The supply of protein foods (which at the economic level of the lower socio-economic groups would be mainly food legumes) together with vegetables and fruits, are of special interest for infants and young children. Among other instruments, a food and nutrition policy would include: agricultural research; the widening of agricultural extension services to include food crops as well as cash crops; access to land for garden plots; storage, transport and marketing; consumer education, especially for new arrivals in urban areas; and low-cost food shops and other measures such as food distribution centres to help low-income groups increase food

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consumption. This report does not discuss these measures.[58/]

149. Prevention of specific deficiencies. Local communities cannot be expected to initiate preventive action against nutritional deficiency diseases, the causation of which may not be fully known to them. This, however, is a very fruitful and economic field of action for governments to follow through their ministries of food and agriculture, health, and possibly others. The most important deficiencies relate to protein-calorie-malnutrition, deficiencies of iron (anaemia), vitamin A (eye lesions) and iodine (goitre).[59/] It usually depends on the Ministry of Health to take the lead in actions for the prevention of these deficiencies and therefore they are included in the next section. However, there are actions

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58/ Further discussion of the main components of a food and nutrition policy may be found in: A. Berg, The Nutrition Factor, Its Role in National Development (Washington, D.C., The Brookings Institution, 1972); Provisional Indicative World Plan for Agricultural Development: a synthesis and analysis of factors relevant to world, regional and national agricultural development, (FAO document CCP 69/4 and its accompanying regional studies); Report of Second Regional Seminar on Food and Nutrition sponsored by FAO, WHO, UNESCO and UNICEF, (Beirut, UNICEF, 1973); Elements of a Food and Nutrition Policy in Latin America, Scientific Publication No. 194 (Washington, D.C., PAHO/WHO, 1970); Interagency Consultative Meeting on National Food and Nutrition Policies in the Americas, (ECLA, FAO, WHO/PAHO, UNESCO, UNICEF), Santiago, March 1973 (document SIAC/PNAN-1); West African Conference on Nutrition and Child Feeding, March 1968, sponsored by the Republic of Senegal and US/AID, with the participation of FAO, OCCGE, WHO and UNICEF; Eastern African Conference on Nutrition and Child Feeding, May 1969, sponsored by the Republic of Kenya and US/AID, with the participation of FAO, WHO and UNICEF (Washington, D.C., United States Government Printing Office); Third African Conference on Nutrition and Child Feeding, May 1970, sponsored by the Republic of Tunisia and US/AID, with the participation of FAO, UNDP, WHO and UNICEF, (Atlanta, United States Department of Health, Education and Welfare).

59/ Joint FAO/WHO Expert Committee on Nutrition, Eighth Report, WHO Technical Report Series, No. 447 (Geneva, 1971).

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in which the support of food planning and agricultural extension is required, such as cultivation of food legumes and certain fruits and vegetables and the fortification of staple foods with protein sources, iron or vitamins. India for example fortifies some of the wheat flour sold in the fair-price ration food shops with groundnut or soybean flour.

Health[60/]

150. In accordance with the general plan of presentation, this section begins by considering the health problems of largely unserved areas. The country is assumed to have a ministry of health hospitals in the capital and some towns; district or provincial health offices, usually not well staffed for child health work, but performing some functions with general coverage, e.g. epidemic control, smallpox immunization; and a number of health centres, each serving a surrounding area. The starting point of this section is the areas that are too far away from health centres for mothers to bring their children regularly.

60/ A brief review of health needs, other than nutritional needs, is given in Chapter I, paras. 35-44. As indicated in para.258 , WHO and UNICEF have in preparation a study on the various means available for the extension of health services to disadvantaged areas, which will be available to the Executive Board at its 1975 session. Although it has a wider focus than the young child, its contents will give a more thorough treatment of the subject than can be offered here. General recommendations on maternal and child health in developing countries are contained in D. Morley, op. cit. For social paediatrics in general see R. Nande, N. Masse and M. Manciaux, Pédiatrie Sociale (Paris, Flammarion Medecine-Sciences, 1972).

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151. It is assumed that the country wants to expand its services to mothers and children in unserved areas, and that it will use the existing structure as a base for this expansion. The discussion covers first the services about which people are likely to be more conscious of need, and in which they may be ready to participate. It then goes on to describe the services in which the initiative for development would lie with the central government. The actual order of growth of services would include elements from both of these categories.

152. The section assumes that the Government would set this growth in a perspective of some 20 years. It would expect during that time to expand the work of the different levels - district office, health centres, and sub-centres or maternal and child health centres - each one expanding its different appropriate responsibilities. It is also assumed that any component which the ministry decided to add to its services in this process of growth would be valid for a certain period, say 10 - 20 years. After that, it could be revised and replaced by more elaborate services. Organizational arrangements needing revision in less than 10 years would usually introduce too many problems of direction, supervision and training.

Maternity care

153. Health is one of the most genuinely felt needs of people, at least in the form of treating disease. Therefore, traditional systems have long been established to provide health care. First and foremost among these traditional systems is assistance to maternity cases. Among the important factors on which this "felt need" is based is neonatal mortality (during the first 28 days of life). It may account for a substantial part of the mortality

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during the first year of life, and much of it is related to delivery practices, e.g. tetanus neo-natorum.[61] Poor obstetrical practices also cause maternal mortality.

154. In various forms help for delivery is available in all communities around the world. With it often goes experience and advice on children's health. On the other hand, incorrect practices and ignorance often turn this help into a danger.[62] Nevertheless, the individuals who discharge this type of function, generally older women, can be a valuable resource for the community. They are respected and listened to by the majority of younger mothers.

155. Therefore, some countries try to improve the skills of the traditional providers of maternity and child care, not only to minimize possible dangers but, in fact, to turn them into a positive asset. Depending on their training, traditional birth

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61/ The Prevention of Perinatal Mortality and Morbidity, Report of a WHO Expert Committee, WHO Technical Report Series, No. 457 (Geneva, 1970). J.E. Gordon, H. Gideon and J.B. Wyon, "A field study of illnesses during pregnancy and their management and pre-natal care in Punjab villages" Indian Paediatrics, Vol.2, No. 9, (Sept. 1965), pps. 330-335.

62/ The Thailand country case study shows that in the rural regions 89.4 per cent of deliveries take place in the home, and only 8.6 per cent of births are hospital deliveries. Country studies for the Lomé conference point out that in Central and West Africa, women have to continue the strenuous physical exertions and long journeys entailed by their roles as producers and mothers right up to the day of delivery. A considerable proportion of the women (43 per cent at best, 95 per cent at worst) give birth alone, outside of any health facility, in the traditional manner, assisted by a female relative or midwife. The studies stressed the drawbacks of these traditional methods from the point of view of the well-being of mother and child and possible hazards, such as umbilical tetanus, puerperal infections and complications during delivery (dystocia). The studies showed that only people living in the immediate vicinity of rural health posts or hospitals with maternity wards, in major towns were able to avail themselves of their services. Lomé conference report, op.cit., p. 19.

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attendants can, in addition to providing more hygienic delivery, stress the importance of nutrition to the expectant mother, encourage continued breast-feeding, provide information about family planning and recognize and refer complicated cases to maternity or hospital clinics.

156. Training programmes for traditional birth attendants can be arranged out of local health centres. They may range from a course of one-day weekly visits to the health centre to six months of full-time work in a centre. Such training has been given extensively, for example, in Indonesia, Pakistan and Thailand. For those who completed training a "graduation certificate" was awarded in the form of a very simple "midwifery kit" containing scissors, alcohol for sterilizing, a sterilizing dish, waterproof sheet and soap. The replacement of consumable items offers an opportunity for encouraging the traditional midwives to keep in touch with the centre.

157. In Senegal and Mali some communities have gone a step further by constructing with government support, a group of traditional houses to serve as a rural maternity centre for a group of villages. Villagers were invited to choose a younger woman in the 35 - 45 age group for training as their village midwife. The village midwives arrange a roster so that two or four are always in attendance, and it is easier for the health centre personnel to help them in case of need.[63/] Going to a rural maternity also gives the mother several days rest. Similar arrangements are also found in East Africa.

158. As financial resources and availability of people for training increase in the community, there will be a transition to the use of

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63/ A. Sanokho, A. Korle, M.N'Diaye and V. Don, "Activités essentielles dans une structure de base de santé publique" Courrier, vol. XXIII No. 5, Sept.-Oct. 1973 (Paris, Centre International de l'Enfance).

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auxiliary nurse/midwives or midwives. The growth of private maternity hospitals in some areas shows the value which women attach to these services. It may be preferable, however, to arrange for delivery facilities in health centres, which offer the community more than maternity care.

Sick children

159. The most frequent children's diseases are epidemic or endemic diseases (e.g. malaria), diarrhoeas, respiratory illnesses and malnutrition. It is useful to find out their relative priority in each zone of the country. However, the following paragraphs do not try to follow any commonly found order of incidence and gravity; rather in accordance with the general concept of this report, they follow a commonly observed order of importance in the eyes of the local community.

160. Just as many pregnant women use traditional midwives for delivery, they go to practitioners of indigenous medicine in case of sickness either because they are too far away from the health services, or because they have more confidence in the traditional healers. Some health services are trying to improve the situation by bringing these practitioners into some form of co-operation, and to improve their knowledge of drugs, of hygiene and of prevention.

161. Simple specific drugs. The availability for sale of modern drugs even in remote places shows the value which people attach to them. This service can also be upgraded by what some countries call the "rural pharmacy" as in Mali and Senegal or the "barrio drug store" in Cebu, Philippines.[64/] In fact the production of specific drugs means that it is possible for a community to treat a considerable proportion of the cases arising in an area with no

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64/ Mali and Senegal case studies.

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more than ten drugs all of which can safely be put in the hands of lay people.[65] The Government can supply such pharmacies more cheaply by supplying generic rather than brand-name drugs, as is done in Niger, and is now being introduced in Pakistan. The "pharmacy" can be run by a co-operative society, in association with the post office, in a school, or in any other village institution. It can also serve as an antenna of the regular health services by advising serious cases to go to the nearest health centre or hospital.

Extension of health centre network

162. As more resources become available, the community may be ready to contribute to extending the network of health centres or sub-centres.[66] As a development from the conclusions of the Bhore report made in India in 1946, a pattern of one primary health centre and three sub-centres has been widely recommended.[67] However, the

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65/ Such a rural pharmacy could contain:

i. Medication for endemic disease(s) (typically, this would be an anti-malarial costing 3¢ per treatment);
ii. Some vitamins and iron tablets (a twelve-month course of multivitamin with iron costs 40¢, iron and folate only about 18¢);
iii. An antibiotic for dealing with diarrhoea, fever and respiratory infections. (There is now a wide-spectrum antibiotic, tetracycline, for all such purposes, costing approximately 15¢ per treatment);
iv. An ointment for skin diseases (6¢ per ounce in ointment box);
v. A drug for expelling intestinal parasites (Piperazine is safe for self medication, and will expel many though not all types of parasite; 6 tablets per treatment costs 1¢);
vi. Aspirin (one-tenth of 1¢ per tablet);
vii. Contraceptives (2¢ per condom);

66/ The Organization and Administration of Maternal and Child Health Services, WHO Technical Report Series No. 428 (Geneva, 1969).

67/ Report of the Health Survey and Planning Committee, Vol.I, Government of India, Ministry of Health.

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recurring costs and the requirements of physicians for the health centres have slowed down the extension of this system. Hence some countries are now considering many more subcentres, which would be under the charge of a woman auxiliary, e.g., in India, the auxiliary nurse-midwife (ANM) and visited regularly (every week) by medical and health personnel from the health centre. When local people are selected for training for auxiliary service, there is more likelihood that the trained person will stay, whereas it is difficult to recruit urban residents to work in rural areas. One model of a rural health service would have as many as 25 subcentres round the health centre.[68/] Through the multiplication of subcentres, maternal and child health centres and "under-five" clinics it is possible to extend the coverage of health centres widely. An important aspect in the context of the present report is that this opens the possibility of beginning pre-natal care with at least one check-up during the second trimester of pregnancy, advice on diet, etc.

163. "Under-five" clinics. Some countries have organized "under-five" clinics to provide the child care functions of a maternal and child health centre. They give low-cost curative and preventive care to as large a proportion of the young children as possible, substantially through health auxiliaries.[69/] They monitor weight in relation to height and educate mothers through the use of a

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68/ Comprehensive Family Planning Based on Maternal/Child Health Services: A Feasibility Study for a World Programme, Studies in Family Planning, vol. 2, No. 2 (New York, Population Council, 1971).

69/ See D. Morley, op.cit., chap. 19; Health care of children under five, Workshop on Health Care of Children under five under the auspices of the Nutrition Sub-Committee of the Indian Academy of Paediatrics, the Institute of Child Health, Niloufer Hospital, Hyderabad, and the Co-ordinating Agency for Health Planning, New Delhi; (Bombay-New Delhi, Tata McGraw-Hill, 1973).

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growth chart (paragraph 188), give immunizations and simple medical care. "Under-five" clinics may be related to the network of health centres.

164. Tanzanian example. The Tanzanian case study gives an interesting organizational pattern. The second Five-Year Plan (1969-1974) starts a process of extending the rural network which by 1980 is to provide one rural health centre for every 50,000 of the rural population, and one rural dispensary for every 7,000, so that 90 per cent of the rural population will live within 10 km. of one or the other. This network is being staffed by medical assistants rural medical aids, nurses, and a new cadre of 2,600 maternal and child health aids. There will be two of the latter at each health centre, one at each dispensary. They are selected from local girls aged 16-20, with primary schooling, and given 12 months at a training centre, and 6 months field work. They give pre-natal and post-natal care, conduct normal deliveries, conduct child health clinics, give health and nutrition education and provide child-spacing services. The Tanzanian country case study says "The outline of the MCH plans described show that the Government intends to tackle the problem from the bottom up. There exist many more complicated aspects which also require attention - but the establishment of a basic service available to all comes first".

165. Home visiting. A further development is to establish a corps of rural health workers who will be sufficiently numerous to visit every house, sometimes as often as once a month, as is now being done in Bangladesh. A number of countries are retraining their malaria workers for this purpose (e.g. Central America). This opens wide possibilities for very simple health services, immunizations, health and nutrition education and simple family planning services.

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At the same time, it is necessary for the Government to strengthen the organizational structure to provide supervision, training and supplies.

166. Diarrhoeas and dehydration. It was mentioned above that diarrhoeas are the most frequent illnesses of children. Through dehydration of the child, they are often fatal. Yet if caught before the terminal stages, simple methods of treatment are available. This situation offers a very important opportunity to improve child care and reduce mortality. In the earlier stages, oral rehydration may be carried out at home[70/] with a simple mixture of clean water, salt and sugar, sometimes with orange juice. For mothers who do not yet know how to do this, such treatment can also be given very simply at maternal and child health centres.[71/] In more advanced cases or when there is serious vomiting, the liquid may have to be given intravenously in hospital or "hospital-like" facilities (it then has to be sterile and free of pyrogens, and the quantity for one treatment costs about $1). The accompanying infection is treated by the use of an appropriate drug such as tetracycline. Once rehydration is accomplished and vomiting is under control, refeeding should be undertaken and the child should be back to a normal diet within a week.

167. Family planning services. Relatively educated women generally want information and help about spacing of births and number of births; women who are unaware that spacing of births is possible need to know about the possibilities of help. This, in turn, makes

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70/ D. Morley, op.cit., chapter 10.

71/ M. and F. King, D. Morley, and L. and A. Burgess, Nutrition for Developing Countries (Nairobi, Oxford University Press, 1972).

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a big contribution to child health and development. Wherever it is in accord with national policy to meet this need, it is most naturally done as part of maternal and child health services. The convergence of community and national interests offer the opportunity for establishing many more subcentres staffed by auxiliary nurse-midwives, able to give basic MCH services and family planning advice. Through helping parents to care for their children, the MCH services strengthen the motivation towards responsible parenthood.72/

Immunizations

168. We turn now to actions depending primarily on the central government, for which not much community initiative can be expected during the early years of the programme - though, of course, some community understanding is essential to success. Immunizations offer the best example, and one that is very widely applied is in the case of smallpox. They provide a major instrument for the reduction of death and handicapping of children and should be given for this purpose whenever it is possible, rather than waiting until the whole country would be covered, even though it is only at that stage that control of the disease as a public health problem becomes possible.

169. Chapter I has described the needs and the main limitations on coverage (paras. 35-38). The points below relate not so much to the cost of the vaccine as to the delivery system.

(a) Health centres. For the 10 per cent of children within reach of health centres, a full programme of immunization is possible, provided mothers are persuaded

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72/ Family Planning in Health Services, WHO Technical Report Series No. 476 (Geneva, 1971); Erhard Eppler, Wenig Zeit für die Dritte Welt (Stuttgart, Kohlhammer, 1972), chap. 3.

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to bring their children. In order to extend the radius of coverage, health services are looking for mobility around health centres or district health centres. The staff of the centre then go out to surrounding villages to give the programme of immunization.

(b) Vaccinators. The range may be further extended by using vaccinators, who are auxiliary workers and can be increased in number without too heavy budget changes. There are limitations on the kinds of vaccination one vaccinator can give, and technical limitations on the conservation of some vaccines.

(c) Mobile teams. Where there is a low density of health services, in order to secure high coverage of immunization, to safeguard vaccine potency and often to work in difficult environmental conditions, it is likely that a campaign by mobile teams working out of district health offices may be the only approach feasible at least initially. This, however, often encounters two difficulties - staff are unwilling to keep on the move month after month, and the operating cost of the transport is too heavy a burden on the health budget.[73/]

(d) "Cold chain". In addition to the problem of bringing the child to vaccinating personnel, some vaccines require special handling - usually low temperature or protection from light up to the point of injection. The provision of a chain of refrigerated depots reaching into rural

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73/ In rural areas of the United Republic of Tanzania, district nutrition teams visit villages at monthly intervals providing health education, vaccination, minor treatment and food supplementation (Tanzanian case study).

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areas may represent a capital investment that is considerable in regard to the health budget. Despite these various difficulties, it is usually very much worthwhile to extend the coverage of vaccinations.

170. Measles. It could be especially worthwhile to expand measles vaccination. Chapter I has shown the terrible effects of this disease (para.36). Vaccination is effective, and records of a dramatic reduction of deaths from measles are available, for example, from Chile and Hong Kong. The Pan-American study of Patterns of Mortality in Childhood, op.cit., speaks of "the great need for additional vaccination programmes in the Region" (p.59). The vaccine has come down in price in recent years, and in 1973 was about 20 cents per dose. Measles vaccine needs low temperature, so extra costs are also required for storage and handling. In many circumstances, extra personnel would also be required. Nevertheless, it appears that these extra costs would be justified by the major contributions to protection of children.

171. Polio. Polio vaccine has now come down in price to almost $.075 for the three doses required; as for measles, the vaccine is delicate and a cold chain is needed. An extension of polio vaccination would be recommended.

172. Other communicable diseases affecting children. A wide approach similar to that discussed above for immunizations, and with similar problems of delivery, can also be applied to the prevention and treatment of communicable diseases affecting children, such as trachoma, and a number of other diseases important in specific regions, e.g. cerebro-spinal meningitis in West Africa, Japanese encephalitis in some areas of Asia.

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Health and nutrition education

173. Health and nutrition education should be a component of all services. An educational drive is particularly needed where the network of services is slim, and people have to be prepared in case of need to walk considerable distances to use them. Health and nutrition education are closely related to the need for popular participation (chapter II, paras. 96-99). In particular, it is necessary to involve the community leaders in any educational effort. There should be co-operative action at the local level among the services in health, agricultural extension, community development, and education, to produce consistent messages from different services rather than possibly conflicting advice. Greater support of health education as a component of services is now being sought in many programmes through the development of project support communication.74/

174. In the past, the effect of health education campaigns as such was often disappointing even where they had a good information content, well adapted to local conditions. However, communication and awareness of the external world are now much more evident in most communities than they were 20 years ago. Readiness to change has increased, spurred on by the observation of the advantages of certain measures. One of the most obvious examples in the field of health is the change of attitude of most populations towards immunization. Vaccines that were refused and resisted only a few years ago are now eagerly sought by the same people. Therefore, it is time that educational measures be reconsidered and employed widely, possibly by putting them in the hands of the people themselves and by following the main health priorities, which is the point of

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74/ King, Morley, Burgess, op.cit., affords an excellent example of teaching material prepared so that paramedical and auxiliary personnel can do effective health education.

view taken in the sections of the present report relating to the services themselves. The effectiveness of these measures has been largely proven by those few countries that have employed them.

175. Environmental sanitation may also be tackled more successfully by involving community leaders. Excreta disposal and disposal of rubbish and prevention of accumulation of pools of water or other breeding places for disease vectors are extremely important objectives, which can only be realized with popular participation. In line with these views, the provision of latrines is discussed in this report as an element of home improvement (paras.204-205).

176. Also related to health and nutrition education are literacy campaigns for women, with appropriate content, and the review of the curriculum for girls in school (see paras. 191-197).

Prevention of nutritional deficiency diseases

177. The following widespread nutritional deficiencies can be simply prevented, insofar as there is a means for reaching the mother and children:

(a) Anaemia. Deficiency of iron and folate is very widespread during pregnancy. In areas determined by the health services to have a high prevalence of anaemia because of deficiency of iron or folate, or both, (i) tablets can be made widely available for daily use during pregnancy and lactation, (ii) since deficiency of iron also affects young children, particularly when they are infected with hookworm or trichuris, smaller dosage tablets can also be made available for them.[75/]

75/ Nutritional Anaemias, WHO Technical Report, Series No. 503, (Geneva, 1972) gives technical information, including the recommended dosages.

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The cost of iron and folate are minimal: the iron for a woman for twelve months costs about fifteen cents, with folate the cost is about eighteen cents. Again the key element is the delivery system - how to bring the women in touch with the health services or other distribution network. Wherever the network exists, it should have stocks of iron and folate. The anaemia problem is tackled in some areas by fortifying processed foods with iron; the technology has to be suitable for the food being used. In India the fortification of salt with iron is being studied.

(b) Vitamin A deficiency in large areas of the world creates a risk of blindness in young children. This can now be prevented by distributing every six months a large-dose (200,000 I.U.) capsule of vitamin A to children under five years old[76/] until nutrition education has convinced parents of the need to include in their children's diet sufficient dark green leafy vegetables or orange and yellow vegetables or fruits, (foods rich in vitamin A or carotene). The cost of the capsule where there is a delivery system available is one cent, or two cents per child per year.

(c) Goitre can be prevented by iodization of salt, wherever salt is centrally processed, at a cost of about four cents per inhabitant per year. Otherwise, intramuscular injection of iodized oil is being tried in several

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76/ For technical information see Prevention of Blindness, Report of a WHO Study Group, WHO Technical Report Series No. 518 (Geneva, 1973).

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countries.[77] The injection lasts for several years, and costs about seven cents, plus the cost of the delivery system.

Treatment of severe protein-calorie malnutrition

178. Parents naturally want treatment for children ill with severe malnutrition, although they may not recognize the cause of the illness. This was not listed above among the actions in which the community would participate because of the high technology required and the high cost of nutritional rehabilitation. Children suffering from cases of kwashiorkor or marasmus are in danger of death and they need to be sent for immediate treatment. In a hospital malnutrition ward, a three-week treatment of kwashiorkor will cost not less than $50, and a three-month treatment of marasmus not less than $200.[78] At the same time, for good long-term results, it is essential to provide for the education of the mother about how to feed her child and for follow-up by home visiting after the child is discharged from the hospital.

179. Nutrition rehabilitation centres. Some cheaper methods are coming into more extensive use through nutrition rehabilitation centres. They can successfully handle the majority of cases, exceptions being where there are also serious infections requiring hospitalization, where intensive feeding procedures are required or where there are other serious complications. Usually the centres are of the day-care type (a mother and child attend a centre daily for about three months) and the cost (50-75 cents per

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77/ Endemic Goitre, WHO Monograph Series No. 44 (Geneva, 1960), Endemic Goitre, Report of the Meeting of the PAHO Scientific Group on Research in Endemic Goitre held in Puebla, Mexico, June 1968 (Washington, D.C., PAHO/WHO, 1969).

78/ The costs are based on experience in Bombay.

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child per day) is about one tenth that of hospital treatment.[79] This method is being used in some 20 countries, including Costa Rica, Haiti, India, the Philippines and Uganda.[80] The community can make important contributions to establishing and operating the centre.

Dealing with moderate forms of malnutrition

180. It is, of course, better for the child, and for the case-load of the treatment facilities which are generally insufficient, if measures of prevention can stop children who are malnourished from actually declining into a state of severe malnutrition. Preventive measures to be undertaken outside the health services were discussed above in the section on food and nutrition (paras. 138-149).

181. The medical services may tend to restrict themselves to treatment of malnutrition through medication. A classic field study by the Institute of Nutrition of Central America and Panama (INCAP) in Guatemala has demonstrated the generally better results from supplementary feeding and nutrition education, compared with medical care.[81] Of course the objective is to combine the two.

79/ Nutrition rehabilitation centres are described by J.M. Bengoa in "Nutrition Rehabilitation Programmes" in Session III of D.B. Jelliffe and E.F.P. Jelliffe, eds., Nutrition Programmes for Pre-school Children (Zagreb, Institute of Public Health of Croatia, 1973). See also "Nutritional Rehabilitation Centres" PAG Bulletin, Vol. III, No. 4, Winter 1973 (New York, PAG), and A Practical Guide to Combating Malnutrition in the Pre-school Child, Nutritional Rehabilitation Through Maternal Education, report of a working conference on nutritional rehabilitation and mothercraft centres at the National Institute of Nutrition, Bogota, Colombia, (New York, Appleton-Century Crofts, 1969).

80/ The Therapy of the Severely Malnourished Child: a practical manual (Uganda, National Food and Nutrition Council of Uganda, 1973).

81/ N.S. Scrimshaw, M. Behar, M.A. Suzman, and J.E. Gordon, "Nutrition and Infection Field Study in Guatemala Village 1959-1964" in Archives of Environmental Health, vols. 14, 15, 16 and 17 (Chicago, American Medical Association). See also statement by N.S. Scrimshaw, Chairman of the PAG, to the 1972 session of the UNICEF Executive Board, document E/ICEF/CRP/72-35.

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The control of infectious disease can do a great deal to prevent the occurrence of severe malnutrition, but a proportion of young children and pregnant and lactating women will still be in need of more and better food. Government policies on food production and marketing, price controls, etc. can help bring nutritious foods within reach of lower income groups, and families can often do more to produce their own food, but supplementary feeding programmes will still be needed for some. The health services should play an important role as a channel of distribution, even though coverage may be limited at present.

182. Depending on the work load and the existing staff, it may be necessary to add an auxiliary worker, perhaps an auxiliary nurse-midwife. In effect, this may be a first step towards an under-five clinic or maternal and child health clinic. Some feeding may be done at centres and sometimes various locally produced foods can be used (this, in fact, is a key feature of practical nutrition education of mothers), but in many places the method of choice will be take-home distribution of cereal-based mixtures fortified with food legumes, minerals and vitamins as found in Balahar (India), Incaparina (Guatemala), Superamine (Algeria) and Sekmama (Turkey). For reasons of cost,[82/] distribution of these mixtures in a poor country generally reaches a small number of the children at risk, perhaps as low as 5 per cent; this number may be increased as the country's resources expand. The onerous task of selection is done on the basis of serving cases as indicated by age/height/weight and oedema. Shortage of food to distribute means greater dependence

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82/ The India country case study reports that Tamil Nadu budgets a little over 80 rupees per year ($US 12 approx.) per young child per food supplement; more than half a million children are reached through a variety of channels.

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on local foods, and the centre demonstrates to mothers how to prepare them for young children. It also drives some centres into measures of agricultural extension in the surrounding community.

183. Supplementary feeding in pregnancy and lactation. Probably the majority of pregnant and lactating women in developing countries have inadequate dietary intakes of calories, protein and certain vitamins and minerals, especially vitamin A, folate and iron. The relatively high proportion of low birth-weight children in developing countries contributes to mortality, morbidity, and handicapping conditions in the first years of life. Birth-weight, which is a key factor in the health status of the new-born, is directly related to the nutritional status and health of the mother during pregnancy. In some developing countries, the low birth-weight rate exceeds 25 per cent, as compared to 6 per cent in the industrialized countries.

184. Ideally, supplementary foods should be available, if needed, beginning at the start of the second trimester of pregnancy, and continuing during lactation. Supplementary feeding during pregnancy protects the health of the mother, prevents low birth-weight and gets the infant off to a better start. However, cost considerations will usually limit distribution to the most needy cases, in the same way as for children suffering from moderate malnutrition. Commonly, the first steps to meet this need consist of making available only vitamins and minerals for distribution out of health centres, but it is highly desirable to go beyond this and include food supplements if resources are available.

Encouragement of breast-feeding

185. To reduce the child malnutrition caused on a large scale by the spreading practice of early or incorrect weaning the following general steps may be taken:

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(a) Study of causes. WHO, in co-operation with the International Children's Centre, is developing a collaborative global research programme on factors involved in the decline of breast-feeding. Each country needs to make some study of the factors applicable to its own population.

(b) Orientation of medical and health personnel. Health services have commonly given little attention to encouraging mothers to nurse their children. There is great need for training and orientation of medical and health personnel in this regard.

(c) Education of the public. In some respects, education has been negative through inappropriate advertising and promotion of formula foods. The PAG has held conferences with paediatricians and the infant food industry to promote co-operative action and encourage breast-feeding. Such measures need to be considered. The mass communications media should also be used.

(d) Support for nursing mothers. For working mothers, and particularly those in wage employment, a crèche is needed on the job. Supplementary feeding for nursing mothers was discussed above in paragraphs 183-184.[83/]

Surveillance of nutritional and health status

186. We pass now to two measures of great importance, but of even less direct and visible interest to the communities served. The first is a simple system of surveillance of nutritional status. For maximum protection of communities and individuals through the

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83/ M. Cameron and Y. Hofvander, Manual on Feeding Infants and Young Children, (New York, PAG, 1971), Chap. 4.

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use of limited resources it is necessary to monitor nutritional status to (a) identify those at risk (early warning) and to (b) identify those already seriously malnourished and in need of treatment.

187. For identification of communities and individuals "at risk", indicators (economic, social, environmental, etc. as well as biological) may be chosen on the basis of association of these factors with malnutrition in the locality in the past. This type of surveillance is at an early stage of development; it may be extended to include some surveillance of child health going beyond the nutritional aspects. Epidemics of infectious diseases such as measles, gastroenteritis and malaria can be expected to increase the prevalence of malnutrition.

188. Considerable experience has been gained in the use of anthropometric measurements such as height, weight, head and chest circumference ratios, arm circumference, etc., for identification of malnourished children. "Percentage of standard weight for age" has been widely used for identifying children with severe malnutrition (i.e. less than 60 per cent of standard weight) or with moderate malnutrition (i.e. 60-75 per cent of standard weight). Presence of oedema indicates severe malnutrition regardless of weight. Ideally, the height and weight of young children are measured regularly, say once a month, and recorded on a growth chart kept by the family. WHO has developed a growth chart for international use; it is now being tried out in 18 locations in developing countries. WHO and various investigators are also studying the possibility of using simple anthropometric indicators, such as arm circumference, or arm circumference in relation to height, for nutritional surveillance. The great interest of arm

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circumference is that it may be used for children over one year of age without knowledge of the age of the child.[84]

189. Where feasible, anthropometric measurements are supplemented with observation of clinical signs and biochemical tests. Where reliable mortality data exist a high death rate between one and five years of age is strongly suggestive of malnutrition as an underlying or associated cause.

Five key actions through health services to promote better nutrition

190. Although in this report the topics are taken up in a different order, it is useful to list five key actions that can be recommended to health services for improvement of nutrition:

(a) Surveillance of nutritional and health status - community and individual;

(b) Management of severe and moderate forms of malnutrition
   1. Treatment of severe malnutrition;
   2. Treatment and prevention of moderate malnutrition - prevention of deterioration in nutritional status:
      (i) Supplementary feeding;
      (ii) Supplementation with specific nutrients;

(c) Control of infectious diseases
   1. With immunizations;
   2. Control of diarrhoea;

(d) Nutrition education/demonstrations. family planning including promotion of breast-feeding and preparation and use of nutritious weaning foods;

(e) Co-operation with local agencies and channels; community preparation.

84/ King, Morley, and Burgess, op.cit., chap. 1-5.

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Literacy and education of the mother and teen-age girls

191. We turn now to the support of the mother, and improving her status so that she can improve the rearing of her children and her contribution to the community.[85/] One of the most obvious means available is literacy training. This again is a service many people want and are ready to contribute to, but it requires organization by a governmental or a non-governmental agency, or a combination of both. Literacy training should be available to both parents. Stress is placed upon the mother and illiterate girls because the literacy of women lags far behind that of men in most developing countries. In the rural areas of some countries as many as 90 per cent of the women are illiterate.

192. A proportion of women are motivated to become literate to gain greater status, skills, and knowledge in order to improve the family's standard of living and their own child-rearing skills. Mothers are also motivated to learn to read as their older children bring school books into the home. Motivation is increased by classes which have recreational as well as educational values.

193. Literacy skills are retained only if they are used in one's job or daily living. This is why there is a great stress on functional literacy in which the content of the curriculum conveys important information to those attending the programme. In the past functional literacy has usually been related to an occupation or an employment. The Director-General of UNESCO sees it as having

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85/ Paragraph 53, chapter I, discusses the extent of illiteracy.

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a much broader role, as an introduction to lifelong education. The functional character of literacy instruction should not be interpreted in a narrow and strictly economic sense: the word "functional" means that approaches and methods are not derived from a preconceived model, but from an analysis of the concrete requirements, objective and subjective, of a given society. The aim, however, is always to enable the individual to take an active part in the life of the community and to modify it from within so that it can better reflect and satisfy his or her own aspirations and values.[86/]

194. Literacy training for women and girls should have a content relating to consumer information, housekeeping, health and nutrition education and child-rearing, as well as work they may do to produce food for the family or earn money through crafts. This approach is being tried in some areas of India and Egypt. In Andhra Pradesh (India), an experimental project in non-formal education has been launched for teaching literacy to rural women with an information content relating to health, nutrition, and family planning practices.[87/] At present, the project covers 48 villages.

195. Ministries of education, women's groups, co-operatives and other non-governmental organizations have developed various literacy programmes. Specific curricula have to be developed for different cultural and vernacular language groups. This requires a certain capital cost, which is small in relation to the large

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86/ UNESCO Chronicle, vol. XIX, No. 11 (Nov. 1973), p. 404.

87/ An Experimental Non-formal Education Project for Rural Women to Promote the Development of the Young Child (New Delhi, Council for Social Development, 1972).

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number of women to be reached. The recurrent costs are primarily to pay the salary of the teacher (who is usually an auxiliary), and to pay for materials. Costs per trainee may be $8 or more per year for about 250 hours, given during the off-peak season for agricultural work. It is also necessary to prepare follow-up reading material for the newly literate women and girls. This has a cost but it is also an opportunity for circulating educational material.88/

196. A most interesting approach is being followed in Colombia by using the radio and radio listening groups. Literacy is being taught to a large audience organized into local community groups monitored by volunteer personnel. This programme, Accion Cultural Popular, begun in 1948, and now reaches more than 200,000 radios.

New elements in school curriculum

197. Looking to the future, it is advisable to include in the school curriculum for both girls and boys teaching material covering health, nutrition, sanitation, psychological development and the role of mother and father. Thus, the primary school curriculum in Mali and Tanzania includes home economics, and in Malawi hygiene and agriculture.

88/ W.S. Gray, The Teaching of Reading and Writing (Paris, UNESCO, 1956); Practical Guide of Functional Literacy: A Method of Training and Development (Paris, UNESCO, 1972); P.H. Coombs, R.C. Prosser and M. Ahmed, New Paths to Learning for Rural Children and Youth (New York, International Council for Educational Development (ICED), 1973), presented to the UNICEF Executive Board in an earlier version as E/ICEF/L.1284; and chap. 2 of Building new educational strategies: to serve rural children and youth, presented in draft form by the ICED to the 1974 Executive Board session as E/ICEF/L.1304.

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Home improvement and reduction of women's work

198. As was indicated in chapter I (paras. 54-64) there are real problems which limit the ability of women and girls to spend time with the family's young children, and to use opportunities which may be available for training and education. The many hours which they spend in drudgery, grinding or processing food by hand, transporting water over long distances, gathering fuel and making the trip to the market on foot carrying supplies, could be reduced by simple technological improvements or co-operative activities. While some progress has been made, a great deal more systematic attention should be given to developing and putting into wide use this type of labour-saving programme. Of course, to the extent that there is a greater sharing of the work by men, the excessive burden on mothers can be reduced.

199. Modern and not so modern technology has developed systems and devices for easing the physical demands on both men and women working in the rural areas. Agriculture has benefited from the development of the plough, harvesting, threshing and milling machines, irrigation pumps, trucks for transportation of crops to market, etc. In most of these cases, though, the impact has been at the level of the larger mechanized farms where there was an interest in saving on the cost of labour.

200. Similar application is necessary for reducing home and village tasks. More needs to be done to press forward research on intermediate technology, especially village-level technology. In countries where growing technical and engineering schools are concentrating their efforts in the direction of research and action related to the needs of their own countries, the lightening of

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women's work could be given some attention. Some research is being done, but the results could be more widely disseminated, and put in effect as part of government-encouraged programmes.

201. Following is a list of the tasks performed by women which would benefit from improved hand-operated, animal-powered, or motor-powered intermediate technology. In some cases the tools to do these jobs have been developed, but need to be introduced into wider usage.

(a) Agriculture and preparation of produce for food

Planting - simple hand-operated devices to ease the back-breaking work of planting rice, potatoes, corn and other crops are available to a limited degree. Getting them to the people who need them is the bottle-neck.

Weeding and cultivating - simple hand-operated implements are available. Improving the design of traditional tools has been researched to some extent. Again it is a question of getting them to the people.

Threshing - there are a variety of foot-powered devices already available.

Grinding and milling - see paragraph 202

(b) Home improvements

Laundry - see paragraph 203.

Latrines - see paragraphs 204-205.

Home construction - improved ventilation and lighting make household duties less difficult and improve health.

Stoves - see paragraph 206.

Extraction of cooking oil - several hand-operated and other slightly more sophisticated devices are now on the market, or can be made from plans which are available.

Food conservation - some improved methods can be introduced to avoid losses in the drying, salting and smoking processes.

Food storage - methods of storage of grains, pulses, etc. in the fields after the harvest to avoid waste are available. The same is true of the household storage of food staples (cereals, pulses, vegetables).

Sewing - the use of the foot-operated machine obviously is a great time saver.

Communications - transistor radios can be used for education/entertainment relieving the effort needed to travel great distances for information and long hours spent at inconvenient times in classes.

(c) Wood for fuel - see paragraph 207.

(d) Transportation

Mechanical - carts, wheelbarrows, bicycle-trailer, boats.

Animal - donkey, mule, bullock.

The paragraphs below comment on some of these items.89/

89/ Much useful information is given in Village Technology Handbook, revised ed. (Mt. Ranier, Md.) Volunteers for International Technical Assistance, Inc. (VITA). Also Tools for Agriculture, Intermediate Technology Development Group Ltd. (London, England, 1973) describes devices and suppliers.

Grain milling

202. The spread of commercial milling facilities indicates that they are wanted, and that with a little help they can be supported by the village economy. In the introduction of motor milling, it is important to avoid over-milling the cereal, which causes loss of minerals and vitamins. In rice-eating areas this phenomenon has been responsible for infantile beri-beri. There is also the added advantage of using the motor for other purposes as well, e.g. pumping water or operating a saw. An illustrative example of the reduction of women's work for a modest investment is described in an annex to this chapter.

Water supply and laundry

203. Providing access to safe water has been discussed earlier in this chapter (paras. 14-18). It is only appropriate to recall that it is a major contribution to lightening women's work. The first step is a well or public fountain. As the economic level rises, there will be more wells and pumps in family courtyards, or, in the case of a reticulation system, more house connexions. The village laundry is an important adjunct to the water system; washing becomes much more comfortable than when bending down to a pool or stream.

Latrines

204. The greatest killers of young children throughout less developed countries are diarrhoea and pneumonia. After six months, "weanling diarrhoea" increases until about 24 months, and exacerbates protein-calorie malnutrition. There is no vaccine and only non-specific measures of prevention are possible to reduce the risk of microbial infection, through control of the indoors and nearby environment. For the indoors, mothers need education in the day-by-day handling

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of the young child on a floor of beaten earth. For the outdoors, means need to be provided for the sanitary disposal of excreta. This is also important in the reduction of worm infections.90/

205. Latrines are necessary to maintain a sanitary home environment. The health services frequently provide cement blocks with a water seal, the cost being approximately $1 in 1973. The family usually provides the labour for the pit latrine. The main obstacle to their use is not their cost but rather traditional behaviour patterns which are not adapted to the denser population of villages and towns. Regulations about the provision and use of latrines have generally not been successful. Communal village latrines are usually dirty and unpleasant, and their use also conflicts with privacy. The main change will have to be cultural change through education and persuasion. Convenience is an important factor to be stressed, especially for women who need a latrine within the family compound.91/ Education on the relation between excreta and disease is also important. It is striking that a large proportion of schools have no latrines or washing facilities, and an opportunity to train the school generation is being missed.

Cooking hearths and stoves

206. Simply raising the level of the cooking hearth by means of sun-baked bricks reduces the amount of stooping by the women, and saves children from burns and scalds, which are the most frequent

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90/ For technical information see E.G. Wagner and J.N. Lanoix, Excreta Disposal in Rural Areas and Small Communities, WHO Monograph Series No. 39 (Geneva, 1958).

91/ Simple but efficient designs of pit latrines are being popularized throughout the United Republic of Tanzania by the Ministry for Health and Community Development (Tanzanian country case study).

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accidents. In many types of house, the reduction of smoke through ventilation or through a simple chimney is a contribution to comfort, and also to reduction of eye diseases.92/

Fuel

207. In many places fuel-gathering ranks with carrying water and milling cereals as one of the major time-consuming tasks of women. This is a very difficult problem to solve until the economic level rises sufficiently to allow the use of kerosene. The Lomé conference suggests that villages should set aside an area of land for quick growing bushes or trees for the production of fuel.93/ This solution may well be less possible in areas of high population density.

Load carrying

208. The work of carrying loads can be reduced by a number of means, including the use of two-wheel carts constructed for pulling along foot paths. The ILO has helped a number of countries in designing such carts. At a higher level of family income the greater use of bicycles by women would be an important step forward.

Specific services for children

209. We turn to more specialized services which are normally developed on a larger scale as the economic level rises. The first of these relates to play and toys, which should have a place at all

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92/ In Paraguay metal stove-tops are sold to families who build their own stoves, raised from the floor with clay bricks.

93/ Lomé conference report, op. cit., p.33.

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economic levels but may receive more formal attention as children come together in day-care centres, playgrounds and other groups.

Play and toys

210. During his first three years, the child is beginning to understand and learn about the real world, its boundaries, its composition, and its relationship to himself. This is done through exploratory contacts by the child with others; the mother is a key element. Play is one of the significant ways in which a child learns and develops his motor ability, intellectual functioning, and socialization patterns.[94/] This is not sufficiently understood, and in some places parents think that they should restrict the young child's play in the interest of his quicker development. In other cases it is restricted because the mother is overburdened, or for lack of space, or other material obstacles. Hence this subject needs to be included in educational programmes for parents on child rearing, in the training of personnel working with children, and in the school curriculum of older children.

211. Once it is accepted that play is part of the child's development, parents and personnel working with children will be ready to give some attention to providing playthings or toys. Through their shape, size, colour, weight, composition and function, they enrich the child's perception of his environment. They should be objects safe for the child to observe, play with, manipulate, and discard. They are tools for play and stimuli for perception; they are real objects that permit fantasy and imagination. Some natural objects

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94/ O. Weininger, "Unstructured play as a vehicle for learning" in International Journal of Early Childhood (OMEP) vol. 4, No. 2 (Dublin, Irish University Press, 1972).

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such as pebbles and sticks make very good playthings. Others can be made by the parents using local materials and by the children themselves as they get a little older. Materials usually available include clay, papier maché pulp, sawdust and glue, and water paste coloured for finger painting. Traditional cultures may offer interesting playthings, e.g. puppets. Toys should differ in their function and complexity so as to provide the child with the challenges of sensory motor activity, intellectual functioning, and development of symbolic thought.

212. As the child grows older the quality of play changes and songs and stories become very important for his development. There are different rules and the child learns to play co-operatively with other children rather than independently. As he approaches school age, he begins to separate thoughts from objects, and becomes more engrossed in his thoughts. Play continues the developmental tendencies of the child and permits him to reach beyond his present being. Play is an important part of day-care as it advances beyond a custodial service (see following paragraphs). Since few children are covered by day-care, measures to support play deserve separate attention.

Day care

213. The growing need for day care, especially for working mothers was referred to in paragraph 66 of chapter I. With formal day care presently available at best for only a few per cent of children in the age-group, other arrangements are often made by mothers who do not have the support of the extended family system. Children may be left with a neighbour, which is better than leaving them alone; day care can be arranged co-operatively by groups of mothers taking turns to look after children; day care may be provided by an untrained person

to whom the parents pay a modest fee. A substantial improvement in these systems may be obtained by offering simple training to women who give, or may be encouraged to give, "home" day care - older women who want to work with children. The possibilities of "play-centres" in villages, run by young women trained on a para-professional basis, and involving the participation of mothers and other family members could be explored. In some places group care of small children is arranged in farm communities during the harvest season.

214. It is also desirable at higher levels of national income to increase the capacity of formal day-care facilities, seeking to use models of organization in which the recurring cost is not above the capacity of the family and the community. The objective is to avoid purely custodial group care, which leads typically to the passivity of children, and on the contrary to use the opportunity to supplement the mother in fostering the development of the child. Day-care centres also provide an opportunity for parent education, but so far very few have been used in that way. Older boys and girls, with some training and with support from adults, could function as helpers and teachers. The developmental objectives for day-care centres should include cognitive development, socialization, development of curiosity, motor development, motivation of learning, and exposure to symbolic materials as books, pictures, and unusual objects. These objectives include a very important contribution to "pre-school education". On the other hand, the formal teaching of reading, writing, and simple arithmetic should not be encouraged for the reasons given in the next section (paras. 219-226).

215. Crèche. The crèche for infants and very young children is a special case of the day-care centre, in which even more care and attention is required. A crèche should be located near the mother

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at work to enable her to continue breast-feeding, while day-care centres are usually located in the neighbourhood where families live. Larger industrial enterprises should bear the cost of crèches for the children of their employees.

216. Costs. Whenever young children are brought together in groups, there is a greater danger of contagion. Medical supervision is required for both crèches and day-care centres, and this will provide health check-ups and vaccinations. A major cost is staff. If the day-care centre is to be more than custodial, there must be a trained attendant for every 15 - 25 children, and salaries should not be paid on the basis of the number of children cared for. Among other running costs, food is a major item. For neighbourhood centres, the parents and community may participate significantly in their construction, maintenance, and at a later stage recurring costs through fees.95/

217. Example of Burma. Burma provides an example of an attempt to promote day-care centres as part of a large programme of dealing with

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95/ For operational information about day care see Day-Care Centres: A Handbook, prepared by the Social Welfare Division of the Department of Community Development and Social Services in the Ministry of Co-operatives and Social Services, Kenya (Nairobi, Longman, 1970); A Saliman, Seasat Al-Riayat Al-Iqtmai Fi Mujtamat Al Hadisa, (social welfare programmes in newly-settled lands) (Cairo, Egyptian Authority for Land Reclamation and Settlement, 1972), especially chap. 3, on day-care services; Dalil Al Amilin Maa Al-Alfal (handbook for workers with pre-school children) (Cairo, National Council of Child Welfare, 1965). Technical information is given in Care of Children in Day-Care Centres, WHO Public Health Papers No. 24 (Geneva, 1964), and training information in JDC Handbook for Teachers in Day-Care Centres (Geneva, Joint Distribution Committee, 1967) and in Guide Booklet for Nursery School Teachers (New Delhi, National Council of Educational Research and Training, 1969).

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social problems through self-help activities in a country with a low GNP per inhabitant (approximately $80). In cities priority in admission to the day-care centres is given to children of low-income families. If a day-care centre is located in a factory, the management becomes involved in supporting it. Staff at the centres often begin as volunteers, and selection is on a basis of a person's ability to relate to children. The Directorate of Social Welfare teaches a basic training course for the teachers lasting for 15 days. Lectures by experienced government day-care centre personnel, and local health personnel are given on (a) child development, (b) health methods dealing with children's diseases and prevention, nutrition, hygiene, and food preparation for children, (c) method courses in story telling, songs and poems, handwork, play, and (d) lessons on administrative techniques.96/

218. Example of Cuba. In Cuba, a country with a much higher level of GNP (approximately $530 per inhabitant) the policy since 1961 has been to extend crèches and day-care centres (circulos infantiles). This began under the auspices of the Federation of Cuban Women, and there is now a national department of day care and crèches in the Instituto de la Infancia. In Havana about 10 per cent of the children aged between 45 days and six years attend day-care centres, and by 1975 it is hoped to have places for 20 per cent. One hundred and fifty children is a typical capacity for one centre. They are looked after in the following age groups: 45 days to 14 months (lactantes); 14 months to two years (parvulitos); two to three years (párvulos); and pre-school, four to six years (pre-escolares). There is a liberal

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96/ Burma country case study.

staffing of attendants, including a full-time nurse, and cook. The centres are visited by a paediatrician twice a week.[97]

Formal pre-primary education

219. While day care, when it graduates from being only custodial, has many important educational aspects, "pre-primary education" is a specific programme of instruction for a few hours per day in preparing the child to be admitted to, and to function well, in the primary school. Such programmes exist in a number of industrialized and some developing countries, though always on a small scale in relation to the age group (four to six years).

220. Evaluations of pre-primary education in industrialized countries show that there is an immediate advantage in cognitive functioning, which fades away after three years in many cases. Pre-primary education appears to have the greatest long-range effectiveness when it is linked with primary education and when the mother is directly involved in the learning process. There is little evidence that such programmes have lasting value when these conditions are not met. The few evaluations made in developing countries indicate similarly disappointing results.

221. Nevertheless, in a number of developing countries there is an increasing demand for pre-primary education. The reasons vary greatly. For many parents early education is believed to be necessary for subsequent primary school performance. Other families use pre-primary education as a means of improving the chance that their child be admitted to primary school. Still other families use it as

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97/ Extracted from information submitted to the Executive Board in 1973, E/ICEF/P/L.1576/Add.3.

a substitute for primary school when their child is not admitted to school. These varying motives place great stress upon teaching the child to read, write and to learn some simple arithmetic. The subjects are primarily taught by rote learning, which many educators think is harmful to subsequent learning.

222. The cost per child for pre-primary education is usually much higher than the cost spent per pupil in primary school. For one thing, the classes need to be smaller. Hence it is difficult for a country that does not have all its children in primary school to provide pre-primary education from public resources. A prior step would be to lower the effective age of entry to primary school - often well above the official six or seven years. Formal pre-primary education is usually paid for by parents' fees. As we have seen, it sometimes develops because of an insufficiency of primary schools provided by the State, but this is not really a suitable response to that problem.

223. Industrialized countries are exploring the possibilities of reaching the objectives of pre-primary education by other means. Two such possibilities are briefly described in the following paragraphs. We have no information that they are at present being tried in developing countries, but they could be of interest because they depend on helping either the mother, or older siblings, to develop young children.

224. Helping mothers (verbal interaction). Through her daily care, play and speech, the mother is teaching the child about his environment and simultaneously encouraging intellectual functioning and motor development. Recent studies have demonstrated that the mother's conversation and behaviour with her child can be enhanced in a simple manner to have significant benefits for the cognitive development of

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the child. Through a series of programmed lessons the mother learns a more effective way of stimulating her child's curiosity, creativeness, motivation for learning, perception, and sensory motor abilities through the way she talks and plays with her child. Such stimulation programmes appear to be more effective and less costly than pre-primary education.98/

225. Several curricula have been developed in which a home visitor demonstrates to the mother how to interact with her child by using selected objects. The mother practices this lesson with the child for about 20 - 30 minutes daily for one or two weeks until the home visitor presents the next programmed lesson. This may continue for half a year or longer, depending upon the mother and the total family situation. It would also be possible for an instructor to demonstrate techniques in play, verbal communication, and child interaction to groups of mothers at a health centre or women's club thereby increasing the number of participants, and this could be within the budgetary possibilities of developing countries.

226. Using older children (cross-age learning). Older children have been used to teach younger children for many years. This has now been formalized into a cross-age learning curriculum in which older children can teach the young child. Primary and middle-school children are taught by their teacher how to interact verbally with younger, pre-school children by using the curriculum developed for the verbal

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98/ Model Programs: Compensatory Education: Mother-Child Home Programme, Freeport (Washington D.C., United States Department of Health, Education and Welfare, Publication No. (CE)72-84, 1972); Lois-ellin Datta, Parent Involvement in Early Childhood Education: A Perspective from the United States (Paris, Organization for Economic Co-operation and Development (OECD), 1973); Norma K. Howard, Mother-Child Home Learning Programs: An Abstract Bibliography (Urbana, III, Eric Clearing House on Early Childhood Education (Eric/ECE), April 1973).

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interaction programme described above. The school child works with his younger sibling, relatives, or neighbouring children. By spending about 30 - 40 minutes per day with these young children he will be able to teach them how to play with objects and how to communicate their thoughts. One child can generally teach two or three younger children. The older child learns how to interact with the young child and thus will be a better parent.99/

Handicapped children

227. Many of the services discussed above include actions which help prevent handicaps in young children:

(a) Prevention of Physical and mental retardation	Health services; food and nutrition programmes; water supply; health education; teaching of personal hygiene;
(b) Reduction of emotional difficulties	Support of child-rearing in the family; parent education;
(c) Prevention of accidents	Home improvements including especially those relating to the cooking fire;
(d) Prevention of blindness	In areas affected by conjunctivitis and trachoma, distribution of antibiotic ointment; education;
	In areas affected by vitamin A deficiency administration every six months of large doses of vitamin A;
	In areas affected by "river blindness" (onchocerciasis), spraying and clearing river courses, now being assisted by the World Bank;

99/ P. Lippitt, R. Lippitt and J. Eiseman, The Cross Age Helping Program (Ann Arbor Institute of Social Research, University of Michigan, 1965).

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(e) Prevention of measles and polio	Immunizations;
(f) Prevention of other crippling due to disease (yaws, leprosy)	Case finding and treatment.

228. Rehabilitation of handicapped children is much more difficult to deal with within the limits of people and resources available. In many countries, it seems possible to recommend only that there should be a centre for training and for finding and promoting simple and economical methods of rehabilitation adapted to local conditions. For many, simple prosthesis can be made. From the age of three on, it becomes important to deal with polio or orthopedic handicaps, and the deaf or blind respond better to education if it begins about the age of two. Rehabilitation in developing countries is a field in which experience is limited. Non-governmental organizations with a special interest in the handicapped can provide valuable advice and assistance.

Rural - urban differences

229. Most of the preceding sections have taken the village as the point of departure; in slums and shanty towns there are some differences in the priority of needs and in the possibilities of service. Water supply, sewerage and electricity need to be provided by technically more elaborate services. Mothers who come in from rural areas are in particular need of orientation and consumer education to help them cope with the urban environment. Separated from the extended family, working mothers need day-care services for their children. It becomes necessary to provide safe play areas for children. The density of urban population makes it easier in some

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respects to provide maternal and child health services, and referral hospitals will be within reach. It is more difficult to encourage family food production, but not impossible to provide garden allotments. The many shanty towns and squatter settlements that are in the course of improving themselves usually have strong resources of community organization that can help in the improvement of services benefiting children.100/

Other government responsibilities

Manpower planning and training

230. National planning generally includes manpower requirements and the necessary training to develop this manpower. Similarly, a national manpower plan is needed for all services to mothers and children. Based upon each plan, a national training plan can be formulated for all levels of personnel. This is the subject of a report prepared for the Board by the International Children's Centre on "Training of personnel for services for young children (from birth to school age)", circulated as an addendum to the present paper. If a number of common difficulties in training programmes are to be avoided, the training of personnel should be adapted to the country's form of organization of services - the number of posts, the proportion of professional and auxiliary, the location of posts as between urban and rural, and the consequent area of recruitment of personnel and selection of training sites.

100/ For a further discussion see "Children and adolescents in slums and shanty-towns", op. cit.

231. The nature of child development and of a young child policy make some aspects of a training programme particularly important, such as:

(a) Orientation training about children's needs, in addition to their professional training, for all who are connected with services reaching into rural areas and shanty towns;

(b) Training for working as a team with supporting services;

(c) Training of polyvalent workers at the local level;

(d) Frequent refresher training;

(e) Selection of people from the local level who want and are able to work with children or with families and the community; and

(f) Training and orientation of local leadership and voluntary agency staff.[101]

These aspects have a bearing on UNICEF assistance policy, treated in chapter IV.[102]

Use of communication media

232. This study stresses the need to reach out to families in the developing countries with information concerning the health and development of young children. Much of this can only be done by the

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101/ The training of local women as potential leaders was discussed in a report submitted to the Executive Board in 1970, "Assessment of projects for the education and training of women and girls for family and community life" (E/ICEF/Misc.169).

102/ The technical agencies of the United Nations publish manuals on training, such as: A Handbook of Training for Family and Child Welfare. Department of Economic and Social Affairs (United Nations Publication (Sales No. E.69.IV.1); The Use and Training of Auxiliary Personnel in Medicine, Nursing, Midwifery and Sanitation, WHO Technical Report Series No. 212 (Geneva, 1961); La formation du personnel de l'alphabétisation fonctionnelle, Guide pratique (Paris, UNESCO, 1972), English edition in preparation; D.J. Bradfield, Guide to Extension Training (Rome, FAO, 1966).

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field workers reaching the community and the family, who have training in the correct approach and use of communication tools. Such a systematic use of communication techniques for better project implementation is gaining wider acceptance.

233. In addition, the use of the information media can play an important role, especially in light of the weak linkage from the central government to the community, and the need to invite local participation. In countries where the vulnerability of the young child is not fully appreciated, an information campaign via the media can help create awareness on the part of parents, officials, and others, that a critical stage in a child's development is before the age of six. It would be necessary to sensitize information media personnel to the importance of the young child, so that more information materials dealing with child care are produced for the media.

234. Mass media communications should convey information about what government services are available for the young child, and also substantive information and advice about proper child-rearing practices and other activities benefiting the young child. In view of widespread illiteracy in many developing countries and low family income, there are severe limits to the efficacy of both television and newspapers in delivering this type of information, especially in the rural areas where it is most needed. With the advent of transistorized receiving sets, the radio medium has great potential in most places. Useful information concerning child care need not be confined to educational radio programmes; wherever possible, such information can be woven into other types of programme, e.g. serialized stories and other entertainment programmes. Television

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and publications, as well as posters, have a supporting role to play, especially in the urban and peri-urban areas.

235. Radio listening groups can overcome one drawback which radio does have - lack of feedback and interaction. These groups afford the opportunity for two-way communication and have been used successfully, especially for farming groups, in a number of countries including Colombia,[103/] Ghana and India. In general the results justify the organizing effort and cost involved in establishing and servicing them.

236. In practice the most difficult aspect of the use of mass media is the preparation of adequate programme material that can convey accurately the messages concerning health, nutrition, and child care. It is important to take into account national attitudes and cultural contexts, as well as the special considerations within given localities. Imported concepts and formats may have certain uses in developing countries, but those who deal in local media, including traditional folk media, should be encouraged to develop their own formulae, which may well include a blend of the modern media with appropriate traditional media. Thus financial provision has to be made for developing local material.

Needed services given little or no discussion

237. Services to meet a number of important needs of the young child have not been discussed because useful information was not obtained

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103/ E.M. Rogers and L. Svenning, Modernization among Peasants: The Impact of Communications (New York, Holt, Rinehart and Winston, 1969).

to enable us to make recommendations about them. Some of these are directly related to poverty, and are difficult to handle except by raising the economic level of the population.

Clothes

238. Many of the developing countries are in tropical and sub-tropical countries. However, there are areas where it is rather cold at night or where there are significant seasonal changes in temperature and the children suffer a great deal from the cold. Lack of blankets and clothes even increases significantly their consumption of calories and therefore their need for food. Cold is probably one of the reasons for the high prevalence of respiratory infections. In addition to clothes and blankets, in many areas mosquito netting would make an important contribution to the reduction of malaria and some other insect-borne diseases. The wearing of sandals or sneakers would also lower the risk of infection by worms. The production of sandals from old tires is a craft that is being encouraged in many countries. Help may be given through women's clubs or other channels for women to make cloth and clothes.

Orphaned, abandoned, neglected and abused children

239. Many developing countries have a considerable number of orphans and abandoned children, victims of abuse and neglect, and children with sick parents or parents with family problems. Such children are at special high risk and require protective services such as foster family homes, adoption, or institutional care. Though the disadvantages of putting children in residential institutions are now known, the lack of machinery or cultural patterns for the equivalent of adoption or foster family care, and the breakdown of responsibility normally carried by an extended kinship network often

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results in this being the only possibility. The improvement of the quality of care of children or institutions would require upgrading the training, numbers, and remuneration of personnel. At the same time the number of homeless children may be expected to increase with urbanization and breakdown of traditional customs. There appears to be little prospect of such costs being met and no satisfactory solution is apparent. Some preventive measures can be strengthened. Family welfare and community welfare social services should extend programmes which emphasize parent education, family counselling, and family life education; health, education and extension services may be used to help.

Retarded and mentally disturbed

240. The number of retarded and mentally disturbed children is probably quite large. More needs to be done to identify children with these problems and to know what can be done for them through education of the mother and the family and through various services, non-governmental as well as governmental.

Worms

241. Worm infestation is almost universal and is a very important element in the diseases of children. Some treatments can only be given through health centres. Reinfestation usually occurs rather rapidly in the absence of good environmental sanitation and the wearing of shoes.

Endemic communicable diseases

242. A number of diseases covering quite large areas of the world have not been discussed because at present there is not an economically feasible technology of control. Schistosomiasis can be reduced or

prevented by keeping waterways clean, which requires a long-term educational campaign in environmental sanitation. Various filarial diseases can be prevented by keeping away the vector; this usually requires substantial action on the environment to clear away its breeding sites. Once the child is infected, the treatment is quite difficult and expensive.

Dental health

243. We hope to be in a position in the final version of this report to comment on dental health for the young child, particularly preventive measures.

Emergencies

244. Experience shows that often in emergency situations the special needs of young children are not widely known to those who are called upon to administer relief measures to a disaster area. The subject needs to be studied and the findings widely disseminated.

Studies required

245. National investigators who participated in this study have raised additional questions in their reports and correspondence. This continuing interest is invaluable in enlarging the awareness and interest of the countries, and in suggesting new lines of action in areas of critical importance to the young child. The main questions about which further information are needed may be summarized as follows:

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(a) Evaluation. Evaluative studies of essential services affecting the young child should include costs, staffing, community linkages, and outcomes. The following points need to be borne in mind in connexion with these studies: (i) existing cost data are scarce, and though the techniques of cost analysis exist, they rarely have been applied; (ii) related to costs is the greater use of auxiliary staff, resident in the community; supervisory services have to be organized; (iii) services have linkages to the people through the local community and its formal and informal structures, and to zonal and national administrative levels - little is known of how this network is functioning and ways of simplifying the co-ordinating structures; (iv) there are very few evaluative studies that look both at the immediate and long-range outcomes of various services;

(b) Community participation. With rare exception, reports and conferences concerned with families and children recommend local community participation and involvement in the issues, planning, and programme development that affects them. However, there is little knowledge, including good case histories, about the best way to orient and work with community leaders and the community, and the reasons for successes and failures;

(c) Special services. There are children with special problems due to physical or mental handicapping conditions, abuse, neglect or abandonment. These are complex and costly problems in which non-governmental organizations have played a pioneering role and whose experience would be useful;

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(d) Role of the mother. The importance of the mother-child interaction requires greater recognition in programme activities. However, there is very little factual information concerning the mother, such as how much time she spends at her daily tasks, her use of cash and control of the family budget, the long-range consequences of functional literacy and other non-formal education, cultural barriers to status and role changes, occupational patterns, and role as head-of-household;

(e) Role of the father. Little information emerged from the country case studies regarding the role of the father in the care of the young child, and it is not clear how significant his involvement is, except as the head of the household and through the mother. His relationship to such matters as raising the mother's status, and house and village improvement is certainly important but there is little guidance on how to inform and influence him;

(f) Psychological and sociological environment of the child. More is known of the physical than the psychological environment of the child. Child rearing under varying cultural conditions should be examined, especially the contribution of traditional life patterns, and how they provide values; and what values should be preserved throughout the modernizing process;

(g) Country problems. Several of the country case studies have touched on issues of special interest in the country on which follow-up studies are felt to be useful.

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ANNEX TO CHAPTER III

Illustration of the reduction of women's work

An example of simple inputs with modest investment which will reduce arduous labour for women in villages can be found in various locations in East Africa, where the hand pounding of cereals has been replaced by small capacity power-driven mills. Hand pounding of cereals is hard work and time consuming; a village family consumes about 2.5 kg. per day of corn, the pounding of which requires up to one hour.

It has been observed in villages in East Africa that women will take advantage of commercial grinding facilities, even though they will be required to carry headloads of 24 kg. three or four miles to the nearest highway, take a bus for another five miles, to have the maize ground in a small commercial mill. The economics of this are interesting, since at a time when maize cost 30 EA cents per kg., women were prepared to pay 120 cents to have 8 kg. ground. At this rate, the grinding cost is equivalent to half the cost of the product, while the total cost involving 100 cents for the return bus fare and allowing 10 per cent "loss" of product which is retained by the miller, gives a total cost for transportation and grinding of 19.6 cents per kg., equivalent to two thirds of the cost of the product (at 1973 prices).

Villagers in areas where commercial mills are not available, have expressed interest to establish small capacity milling facilities. In some areas where rural electrification has been completed, the mills may be driven by electric motors. In other areas diesel driven units would be required. The economics of the two types of drives have been reviewed and are cited below:

Cost of cereal mill, capacity 50 kg./hr	$600
Cost of 3HP diesel drive	$800
Cost of 1 1/2 HP electric motor	$100

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In East African currency	In shillings
Diesel units plus mill, installed	10,000
Building costs	2,000
Total capital costs	12,000
Electric motor drive plus mill, installed	6,000
Building	2,000
Total capital costs	8,000

Operating costs

	Diesel	Electric
	- in shillings/day -	
Man and helper	20	20
Diesel fuel 1 shilling/hr.	12	—
Oil	1	—
Electricity - 0.5 shillings/kwh	—	6
Maintenance	2	1
	35	27

Output: 50 kg./hr. 12 hours, 75% efficiency: 450 kg.
Cost kg. meal: $\frac{3500}{450}$ = 7.8 cents E.A. from diesel mill

$\frac{2700}{450}$ = 6.0 cents E.A. from electric mill

Now if an allowance is made for depreciation of the equipment assuming a ten-year life for the combined units:

Diesel	1,000 shillings
Electric	600 shillings

On the basis of annual throughput of 160,000 kg. depreciation charges would be:

Diesel unit - 0.6 cents/kg. meal
Electric unit - 0.38 cents/kg. meal

Total costs ground meal — 8.4 cents/kg. from diesel mill
6.4 cents/kg. from electric mill

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These costs are 56 per cent and 42.5 per cent respectively, of the commercial grinding costs in the area. Average use/day/family: 2.5 kg./day of corn meal. Therefore, the mill could handle requirements of 180 families. Since an average village has 40 - 50 families (200 - 300 persons), the mill could process flour for four villages. In many areas four villages will be found within a three-mile radius - walking distance even with a head load. Thus, a small mill centrally located to serve four or five villages, installed at a cost ranging from 8,000 - 12,000 shillings, depending on the availability of a reliable electric supply, would reduce the workload of 180 women from up to one hour hand pounding each day, to a three-hour work period once in ten days, when the maize could have to be carried up to three miles to the mill, and back.

There is a good potential of such a mill to generate a small profit and to serve as the focus for other activities requiring a power input. A charge of two cents EA/kg. of meal would generate 3,000 shillings/year - sufficient to purchase a hand pump for water and to sink a shallow well.

The psychological effect of this first step in the new world of the application of a mechanical energy source to replace human energy, can be used for the stimulation of new ideas and actions which, if channelled constructively, would lead to other labour-saving developments.

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IV. UNICEF ASSISTANCE POLICIES

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Summary

246. Chapters II and III have tried to suggest the basis for a systematic national approach to improving the situation of the young child. The Executive Board of UNICEF has indicated the high priority it gives to assistance in support of this objective, including sectoral components that could ultimately form part of a national effort for the young child. The purpose of this chapter is to review relevant UNICEF assistance policies in the light of the preceding suggestions for national action, to see if any changes of emphasis are desirable. In addition to recommending some development of assistance policy in the fields of water supply, food and nutrition, and maternal and child health services, the chapter recommends more support for women's literacy campaigns and for the improvement of home and village living conditions, in order to better the indoor and outdoor environment of the child while also reducing the excessive drudgery of the mother's work. A final section deals with the organizational problem of how UNICEF, apart from offering material programme aid, might stimulate further interest in improving the situation of the young child within developing countries, and among bilateral aid agencies and non-governmental organizations.

Trends in UNICEF aid

247. The following table shows UNICEF commitments approved by the Board since 1960 for projects benefiting young children, within the framework of all programme assistance.

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Annual average of UNICEF commitments for projects benefiting young children, 1960-1973

Fields of assistance	Annual averages 1960-1964	1965-1969	1970-1973	1960-1964	1965-1969	1970-1973
	- in thousands of US dollars -			- in percentages -		
Child health	18 100	19 200	22 800	52	49	37
Water supply	2 300	1 800	7 100	7	5	12
Child nutrition	6 800	3 800	5 800	19	10	9
Family and child welfare	1 100	1 600	3 500	3	4	6
Subtotal for young children	28 300	26 400	40 200	81	68	64
School feeding	900	300	100	3	1	0
Education	3 400	8 900	15 600	10	23	25
Other long-term aid	1 000	1 700	4 000	3	4	7
Emergency aid a/	900	1 400	2 700	3	4	4
Total aid	34 500	38 700	61 600	100	100	100

a/ Rehabilitation included in the other fields of assistance.

248. The content of projects within the various fields of assistance varies somewhat from country to country, and are not broken down according to the age group of children to be assisted. Nevertheless, it is reasonable to say that projects for child health, water supply, child nutrition and family and child welfare especially benefit the young child. On the other hand, assistance to education benefits school-age children.

249. The table shows that since the Board's consideration in 1965 of assistance policy to projects benefiting the young child, there has been a substantial increase in the dollar amount of support to such projects. Assistance to child health projects has increased by 20 per cent; to village water supply projects by more than three times; to child nutrition by 50 per cent; and to family and child welfare by 100 per cent. In total, assistance to these projects has increased by over 50 per cent.

250. The second part of the table shows however that there has been a reduction of the proportion of assistance going to fields, particularly benefiting the young child. Behind this lies the fact that in 1961 the Executive Board decided to assist projects in whatever fields were agreed to be of the highest priority for children in the country concerned, and in which effective action was possible.104/ This opened the way in the following years to assisting education, to which many countries, particularly in Africa, attached the highest importance. Since UNICEF advocates a comprehensive and systematic approach at the national level to deal with children's needs, it is logical also for UNICEF to be ready to give assistance to those components that are agreed to have the highest priority. Furthermore, for the reasons mentioned earlier, assistance to the education of girls and boys, which may include specific instruction about health, nutrition and child rearing, will certainly make these children into better-informed parents in the future. It also has an immediate effect in those families where they are helping to look after younger children.

251. In the field of child nutrition, participation in supplementary feeding in schools was phased out. Some of this was taken over by the World Food Programme and non-governmental organizations working

104/ See Official Records of the Economic and Social Council, Thirty-second session, Supplement No. 13B (E/3525 - E/ICEF/431), paras. 70-73.

overseas. UNICEF's assistance was more concentrated on the difficult field of helping to improve the nutrition of the young child. The PAG began its work in 1955. At first it gave special attention to ways of using indigenous resources for meeting the food needs of children including particularly vegetable sources of protein and weaning foods. UNICEF has since been helping a number of countries develop their manufacture of weaning foods, principally for the urban young child. It was in 1957 that the Executive Board adopted the policy of "expanded aid to nutrition" (later called "applied nutrition"), designed to help the rural population grow and use foods needed for better child and family nutrition, and to support nutrition education and the training of the personnel required. There is no doubt that such projects, where successful, are more useful in the long run than distribution of food from outside; they are also far more complex, and the expansion of assistance in this field has been less than the Board desires.

Emphases in assistance policies

252. In general UNICEF assistance should be available to help countries implement the recommendations that are given in chapters II and III, within the limits of resources, and selectively according to the priorities found in each country. In fact UNICEF's existing assistance policies make this possible. However, there should be some change of emphasis in their application in order to take advantage of opportunities offered by national policies that are evolving to give more attention to disadvantaged areas, and by technological developments.

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253. Among the approaches discussed in chapter II, the Executive Director recommends that UNICEF give emphasis to helping countries to:

(a) Encourage local participation in services benefiting the young child;

(b) Develop functional services in ways that are mutually supporting at the field level;

(c) Extend basic services widely into areas substantially unserved;

(d) Strengthen their planning and monitoring machinery for the above.

254. UNICEF's aid for pilot or innovative projects should be particularly used for helping countries to work out methods of community participation and national and local government support for it; for working out patterns of organization, training and services that are within the financial means of national and local budgets (including contributions from the communities). UNICEF's aid for project preparation should be used to assist the participation, in this work, of universities and research centres in developing countries, both specifically for their own countries and on a regional or sub-regional basis.

255. The following paragraphs view current UNICEF assistance policies in the light of what has been set out in chapter III on potentials for the development of services and programmes.

Village water supply

256. UNICEF assistance in this field is growing rapidly in response to very great interest in developing countries. The assistance policy approved by the Board in 1969, stating that UNICEF aid should concentrate on demonstration projects, was subsequently broadened by the Board's approval of aid to a number of projects with wide

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coverage. New guidelines for this more extensive assistance are being developed by the WHO Secretariat in consultation with UNICEF and others. The study supports this broader approach. At the same time it suggests that assistance be used to encourage the improvement of the quality and effectiveness of projects through such means as health education, and the use of planning and working methods that secure community participation for installation and maintenance. Furthermore, assistance should be used to encourage various possibilities of follow-up to the provision of water, which would then become a starting point for village and home improvement and provision of new children's services.

Food and nutrition

257. The assistance policies in this field call for few remarks at this stage since the Executive Board will be reviewing them at its 1975 session on the basis of a report being prepared by Dr. Jean Mayer. However, as is indicated in the Executive Director's General Progress Report to this session, there is a special problem in 1974, which we may expect to continue for the next few years, in that the substantial increases in the prices of staple foods will have a bad effect on the nutrition of children in families in the lower socio-economic classes. Expanded assistance may be requested by countries undertaking measures to counteract this. This may require an expansion of assistance to supplementary feeding for young children, and also to "applied nutrition" projects. Assistance for the home storage of foodstuffs could be included as one of the best means to obtain a rapid increase in food availability during the period between harvests.

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Mother and child health services

258. MCH is the major field of UNICEF assistance. Ways in which services can be extended into disadvantaged areas will be coming up for review by the Executive Board at its 1975 session on the basis of a study by WHO and UNICEF.

259. Local participation. The emphasis in the present report on the advisability of starting with services that local communities understand and want, and in which they will participate, should influence the content of UNICEF aid. Relatively simple measures, which in themselves cost very little, can deal with a large proportion of the priority health problems from which children in developing countries are suffering. They can be applied over a wide area wherever a simple service delivery system can be organized. UNICEF should give more assistance to helping countries solve financial, organizational and administrative problems in their delivery of services. Among the technical possibilities that could be much more fully exploited are wider coverage of immunizations, prevention and treatment of anaemias, and of vitamin A deficiency, treatment of trachoma, and treatment of diarrhoeal diseases and dehydration and of malaria in children. Used in this way UNICEF aid can help some essential maternal and child health services to reach out to the surrounding population, to educate them and to stimulate the growth of a health network for the community.

260. Responsible parenthood. The support of responsible parenthood through health and welfare services that help parents to assure the development of each of their children deserves increasing emphasis in UNICEF assistance.

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261. Measles and polio vaccinations. Among the immunizations that should be given more widely wherever the necessary organization can be set up, measles vaccination deserves special attention. In view of the great importance of measles in the mortality of young children, of the effectiveness of the vaccine, and its recently lower cost, greater UNICEF assistance would be justified to help countries to extend their immunization programmes. The wider use of polio vaccination should also be assisted.

262. Trachoma and other treatments. Means should be explored to overcome the lag during the last ten years in the treatment of trachoma, a major scourge of children in a large region of the world. Secondly, UNICEF's standard supplies, equipment and drugs for a wide range of medical care need to be updated to take account of recent pharmaceutical advances and the lower prices of some drugs and vaccines. WHO is now advising us on a revision of guide lists for drugs and medical supplies.

263. Discouraging early weaning. UNICEF should be ready to assist the various steps described in chapter III for discouraging early weaning: the study of the situation in each country, orientation of medical and health personnel, the education and encouragement of mothers in this regard, use of mass media, schemes of supplementary feeding for nursing mothers, and other measures that may be suggested for trial as a result of local studies. UNICEF should continue support of the PAG, along with the sponsoring agencies, in promoting co-operative action by paediatricians, government agencies and the infant food industry in minimizing problems of early weaning.

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Literacy and education for mothers

264. The over-all objective of raising the status of women would be an important contribution to responsible parenthood and also to child care. Among the indirect measures that can be taken to raise the status of women in the eyes of their families and of the community, probably the teaching of literacy is one of the most practical actions that can be taken. The Executive Board in 1973 agreed on greater emphasis in the field of non-formal education, of which literacy programmes are an important part. UNICEF has begun to assist a few projects for teaching of literacy to women and adolescent girls with content related to the needs of household and family as described in chapter III, paragraphs 191-196. UNICEF has also been assisting women's clubs and the women's section of community development which sometimes include promotion of literacy in their programmes. More assistance than in the past should be given to the expansion of literacy projects for women and adolescent girls, including the necessary accompanying measures to strengthen women's clubs, co-operatives, extension services, etc., and the regular circulation of reading material. The increase in the school attendance of girls and the improvement of the curriculum are also important contributions, which fall outside the scope of the present report.

Home improvement and reduction of women's work

265. This report recommends greater assistance for home and village improvement with the objective of reducing the excessive drudgery of mothers. Some assistance of this type has been given in the past as part of women's community development work and home economics extension. The attention now being given to intermediate technology by private research, governmental and voluntary agencies can indicate

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new solutions, which have to be tried out through community development organizations, women's clubs, the extension organizations, co-operatives, etc., and then adopted on a wide scale. UNICEF could make an important contribution to this process.

More specialized services

266. Day care. The need for day-care services is growing rapidly as more women go into types of employment where they cannot take their children along. More UNICEF assistance will be required, but this does not pose a problem of policy; rather it involves finding ways to establish and maintain more such centres at costs which the country and the family can afford, and to improve the quality of the care they provide. Improvement of quality includes play, and developing the educational functions of day care. Assistance to formal pre-primary education (teaching of reading and writing) would generally not be given in areas where primary schools are not yet available for a substantial proportion of children, for the reasons set out in chapter III. An exception might be made for the purpose of applied research and teacher training.

267. Handicapped children - prevention. There is greater scope than in the past for helping countries in the prevention of handicaps of the young child. Many of the important causes of blindness could now be attacked by preventive action. UNICEF assistance has recently started for the prevention of child blindness due to vitamin A deficiency. In earlier times, assistance has been given to the control of conjunctivitis and trachoma through mobile campaigns, which have often been too costly for countries to maintain; it may be possible in future to reach more young children than at present through such channels as health centres, schools, more local auxiliary staff, and the use of cheaper forms of transport. The use and

expansion of existing services for more effective prevention of handicaps would require some central unit responsible for organization, training and supervision. UNICEF should take up opportunities to review these possibilities with interested countries.

268. Rehabilitation of the handicapped. UNICEF assistance policy includes assistance to national centres for the training of personnel for the rehabilitation of the handicapped, and related demonstration service facilities. There is scope for greater efforts by UNICEF, in collaboration with other organizations, to help find methods of early diagnosis and rehabilitation that are within the resources of personnel and money that developing countries can make available.

Governmental supporting services

269. Training. A vital component of the programmes discussed earlier is the training of officials and personnel, for all the levels involved from direction and supervision to the auxiliary field worker. It includes the appropriate orientation of people working in the various services in the area, where they are not directly or obviously related to the young child. UNICEF assistance policy is to support training for all types of personnel working in services benefiting children, appropriate orientation courses for other services, and practice areas around training institutions for giving field training. A priority use of UNICEF assistance would be to encourage the development of types of training that are frequently lacking at the present time. These include the orientation of staff to young child problems extending beyond the limits of their strictly professional training; the training of polyvalent workers at the field level; training of workers in different professional fields to work together as a team; and the training of field workers in the use of communication techniques and tools, and working with community leaders and the community generally.

270. UNICEF gives a substantial part of its assistance for training, and it would be appropriate to give correspondingly important attention to the adaptation of the training it is assisting to the form of organization to be staffed, and to revision of curricula in order to prepare trainees for the types of approach outlined in chapters II and III.

271. Use of communications media. UNICEF assistance would be important for the most frequently neglected aspect of information media, namely adequate investment in the preparation of materials designed to reach various levels of the population, including the parents, on the various vulnerabilities of the young child and what can be done about them.

272. Planning, monitoring and evaluation. UNICEF assistance for the strengthening of national machinery for planning, monitoring and evaluation in fields benefiting children should have particular application in services benefiting the young child. This would not constitute a departure in assistance policy, as it was discussed in the Board in 1973 (E/ICEF/629, paras. 109-112), but the policy should receive a wider application.

Assistance for the preparation of policies and projects

273. For any policy or project going beyond a single ministry, the initiative will usually be taken by the national planning commission, the presidency or a zonal planning authority within the country. UNICEF should be in a position to respond to requests for help from such sources for work benefiting the young child. That the problem is multidisciplinary is an additional reason for making maximum use of national and regional research and teaching institutions - not only those dealing with development but also those in such fields as administration, agriculture, health, nutrition and social welfare.

UNICEF has some relevant experience along these lines from its work with countries that have wanted to make more explicit provisions for children in their next five-year plan.

274. Assuming that the best efforts have been made to use the resources available in the country and the region, there still may be need for a consultant or consultants from outside. It is neither practicable nor desirable to have large numbers of consultants in any one country for programme preparation. Therefore, such requests should be handled selectively. One type of request relates to a consultant to help with a comprehensive approach. In this case the situation is somewhat similar to that followed by UNICEF in helping countries prepare studies which were the basis of the Lomé and Guatemalan regional conferences and the Andean Group Conference on nutrition planning. In all of these cases the necessary help was given by several not-too-long visits by one consultant. The Executive Director is developing a panel of persons who could be called on for this type of work.

275. A second type of request relates to a particular aspect of a more comprehensive approach. This type of consultant may more readily be found in consultation with the specialized agencies and some non-governmental organizations.

276. In addition to action at the country level, some encouragement and help should be given at the regional and international level, for the exchange of publications, information and experience among countries; for applied research; and for the orientation or training of key personnel towards the comprehensive approach that is the basis of the present report. Foundation and other aid sources may also be willing to contribute to these requirements.

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277. Many of the country case studies prepared in support of the present report, provide a basis for discussion for developing a young child policy and extension of programmes. A number of programmes have come, and others are in preparation, as a result of earlier conferences or seminars where national planners met people concerned with children's needs, e.g. Lomé 1972, Guatemala 1972, Madras 1970. The awareness created by these discussions will still yield further results in programmes. Apart from such special occasions, the discussion of country programming under the auspices of UNDP offers the opportunity of bringing to explicit attention young children's needs and possibilities for action.

278. However, progress in this field will not be rapid, and UNICEF support will be necessary for a number of years in order to obtain results.

UNICEF organization

279. The UNICEF representative will usually be able to get the help he needs for his own office by the use of a consultant. In one field office serving one large country with a substantial programme for the young child, there is a programme officer with special responsibility for it; and more such cases may occur in the future. In 1965 the Executive Board suggested the appointment of a person at Headquarters to be responsible for the encouragement of policies and programmes for the young child, and for furthering the implementation of the Board's assistance policy in this field. Instead, the attempt was made to use only consultants required for particular projects. In retrospect, it appears that continuing attention by a staff member in addition to the use of consultants, would probably have produced more results. Therefore the Executive Director is including such a post in the 1975 budget estimates. The responsibilities of the UNICEF

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officer would include helping field offices in their consultations with government ministries concerned, and in getting for them the consultant services and information they will need; helping to arrange training activities; encouraging applied research, including further studies of UNICEF assistance in areas not covered in this report; assisting a greater exchange of information and experience nationally, regionally and internationally, and liaison on these matters with other members of the United Nations family and non-governmental organizations.

Next review

280. Assuming that this person would take up duty by early 1975, it would be desirable to review in 1978 or 1979 whether the over-all assistance strategy outlined in this chapter is working, and whether to continue it, or modify it.

ANNEX I

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This is a selection of publications that may be useful for obtaining further information for preparing policies and programmes. In accordance with this purpose, it includes some publications that are not referred to in the report, and does not provide a complete listing of the references in the text.

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67, Irving Place
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67 Av. de la Toison d'Or
1060 Bruxelles, Belgique

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12 rue Jean de Beauvois
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ANNEX II

Note on country case studies

As background for the study and in order to help a number of developing countries examine their own national efforts affecting the young child, case studies were undertaken in 18 countries. The studies were primarily carried on by national institutions, scholars and researchers, with a minimum of external technical assistance and with some material assistance from UNICEF. To the extent possible, the studies bring together and analyze existing reports and data. A number of studies are still in process.

In 8 countries - Colombia, Honduras, India, Niger, Peru, Republic of Tanzania, Thailand, Tunisia - the studies involve: (a) a review of national policies and programmes, and (b) field observation in selected areas with differing socio-economic situations.

In 10 countries - Burma, Egypt, Ghana, Malawi, Mali, Mongolia, Philippines, Senegal, Yemen, Zambia - the studies are focused largely on examples of individual programmes and activities.

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